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QUARRY ACCIDENTS IN THE UNITED STATES

DURING THE CALENDAR YEAR 1912

COMPILED BY

ALBERT H. FAY

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QUARRY ACCIDENTS IN THE UNITED STATES DURING THE CALENDAR YEAR 1912.

Compiled by ALBERT H. FAY.

INTRODUCTION.

According to the figures compiled by the Bureau of Mines and presented in this paper, the number of men killed in and about the quarries in the United States during 1912 was 213. Compared with the fatalities reported for 1911, which totaled 188, there was an increase of 25, or 13 per cent. The number of men employed in the quarry industry during 1912 was 113,105, as compared with 110,954 in 1911, approximately 2 per cent more. The fatality rate for 1912 was 1.88 per 1,000 men employed, as compared with 1.69 during 1911, an increase of 11 per cent.

In France (Table 27) for the 5-year period, 1906 to 1910, inclusive, the fatality rate from quarry accidents was 1.08, and in Great Britain (Table 26) for the 10 years, 1903 to 1912, inclusive, the rate was 1.04 per 1,000 men employed. The higher fatality rate in the quarries of the United States probably results from less stringent regulation and less systematic inspection. Nearly all quarries are open to the sky, so that the workers have ample light and air and are not exposed to the risk of roof falls; hence the fatality rate should be lower than in underground mining for coal or metals.

The figures compiled by the Bureau of Mines show that the total number of men employed in or about the coal mines in the United States in 1912 was 722,662, and of this number 2,360 were killed, or 3.27 per 1,000 employed. In 1912 the metal mines employed 169,199 men, of whom 661 were killed, or 3.91 per 1,000 men employed.

In both the metal and coal mines the fatalities due to falls of roof, wall rock, ore or coal, were, respectively, 34.82 and 48.77 per cent. Although quarry work is performed in the open, yet falls of rock or overburden caused 23.94 per cent of the fatalities reported for 1912. The principal hazards of quarrying appear to be about equally divided as follows: Falls of quarry material, explosives, and haulage; these three represent slightly over two-thirds of all fatalities. The handling and transportation of the material produced in the quarry ranks third. The quarryman is not exposed to the danger of mine fires, which are responsible for many deaths in coal and metal mines.

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ACKNOWLEDGMENTS.

The bureau takes pleasure in acknowledging the cooperation of the operators who have kindly furnished the information summarized in this report and hopes it may be able, as a result of this cooperation and of the experience gained in collecting the figures for 1911 and 1912, to publish the figures for 1913 with greater promptness. The statistics for New York were furnished by W. W. Jones, State mine inspector, Albany, N. Y., to whom credit is herewith given.

PUBLICATION OF ACCIDENT STATISTICS.

In publishing the figures contained in this report the Federal Bureau of Mines has no intention of encroaching on the field covered by the annual or biennial reports of the State mine inspectors or mining departments. It is hoped, however, that the distribution of the data contained herein will help to establish a uniform basis for recording and reporting quarry accidents, the number of men employed, and the number of days' work performed. By all of the statistics being thus placed on the same basis, the making of comparisons between different kinds of quarries or between quarries in different States, and the drawing of conclusions will be rendered much easier.

The plan that, it is believed, will yield best results in procuring satisfactory data is that of cooperation between the Bureau of Mines and the inspectors or other appropriate representatives of the States. This plan will also have the merit of avoiding duplication of labor and expense and will insure satisfactory results at minimum cost to both the Federal Government and the several States. Such an arrangement has been made with W. W. Jones, State mine inspector of New York, who furnished data for that State. Attention is called to the fact that many States have no system of quarry inspection and there is a lack of uniformity in the reports issued by the States that have inspectors. Moreover, the fiscal years of the States are not uniform; some end in June, others in September or October, and still others conform to the calendar year.

The bureau has revised the classification of causes of accidents that was given in the quarry report for 1911 (Technical Paper 46), by omitting a number of minor causes and adding others that the returns received in 1911 indicated were more important.

The Bureau of Mines will be glad to receive suggestions from State inspectors and other persons interested in quarrying as to the form in which statistical data can be presented most effectively and as to methods of making such data of most use to the quarry industry.

SCOPE OF STATISTICS.

The tables giving the accidents in the quarries in the United States for the calendar year 1912 have been compiled by the Bureau of

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Mines from reports received directly from the operators (except in New York) and represent all stages of the industry. In the collection of the statistics the effort was made to obtain returns from all quarries, without regard to their size or the number of men employed.

Although the Bureau of Mines is authorized to collect data relating to accidents at mines and quarries, there is no Federal law compelling operators to render such reports. The reports received from operators are voluntary responses to the bureau's requests for this information. The majority of these requests were answered cheerfully and immediately. The statistics herein tabulated represent 3,163 operators who actually worked their quarries during the year. As far as can be ascertained all of the large companies made out detailed reports, so that measured by production the statistics represent the industry.

Many of the answers received indicate that one reason why some operators did not reply was that their quarries were small, and that as no accidents occurred a reply was not deemed necessary. It is hoped that every operator, whether his quarry is large or small, and whether an accident occurred or not, will consider his property worthy of a report for the last year. The true accident ratio can be obtained only when all reports rendered give the number of men employed as well as the number of days worked.

SERIOUS AND SLIGHT INJURIES.

What constitutes an accident is a question that is of fundamental importance in the collection of casualty statistics, but different answers are given by different quarrying, mining, and other companies, as well as by the laws of different States. One operator or State may require a detailed report of any injury that delays the worker or that draws blood; another may not consider an accident worthy of record that does not come to the attention of the foreman or shift boss.

Many companies have so increased the list of reportable accidents that their statistics seem to show a far greater proportion of men injured now than in the past. However, it is desirable that every company have a record of any accident that may result in a serious injury for which compensation may be claimed, so that every case can be traced to its origin and full details will be available.

The distinction made in this paper between a serious and a slight injury is entirely arbitrary, but as such a distinction had to be made, the bureau defined a serious injury as one that would disable a man enough to keep him from duty 20 days or more. Among such injuries are broken arms and legs, loss of an eye, and severe cuts or bruises. Injuries classified as slight were those involving a loss of time of not less than 1 day nor more than 19 days. In this class may be placed

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such injuries as cuts, sprains, mashed fingers, bruises, dirt in eye, slight burns, effect of powder smoke, etc. Of course any slight injury may become infected and thus result in a serious injury as defined above.

FATALITY AND INJURY RATIOS COMPARED ON BASIS OF YEAR OF 300 WORKING DAYS.

The tables in this report show wide differences in the number of days the quarries were operated during the year. Therefore the actual time of operation should be taken into account in considering accident ratios. It is evident that if a group of men in one State, Kansas for example (Table 14), works only 195 days during the year and a similar group in another State, as Colorado, works 307 days in the same industry, the hazard is not equal, and the fatality rates of 2.01 for Kansas and 4.75 for Colorado are not fairly comparable, and to make them comparable they must have a common denominator in the number of days worked. In Germany, the Imperial Insurance Office requires reports submitted to it to show the total number of days of labor performed at the various industrial plants. This number is divided by 300, which gives the equivalent number of 300-day workers.

As a quarry can be operated only about 300 days in a year, if Sundays, holidays, and a few days for repairs be excluded, a 300-day year has been used in this report and the accident rates in the various States have been compared on this basis in Table 19. The average number of days that quarries worked during the year ranged from 142 in Wyoming to 307 in Colorado, the average for the United States being 249. Table 19 shows that on the equal-time basis (300 days) the Kansas rate rises to 3.09 and the Colorado rate declines to 4.64; so that, taking the total time of exposure to risk into consideration, the difference between the two States is lessened.

The bureau will be pleased to receive suggestions from operators or other persons interested in quarrying or mining operations as to the definition of serious or slight injury.

The practice of State inspection departments varies widely. One State may require reports of fatal and serious injuries only, but without defining a "serious injury," and require no reports of slight injuries. One State may require reports of all fatalities and of all injuries incapacitating an employee for one week; another may specify the reporting of accidents that cause disabilities ranging from 1 to 14 days. Thus one State may report, perhaps, only 25 per cent as many injuries as some other State which actually has fewer men engaged in quarrying and mining, and an inference based on the figures published by the two States that mining is much safer in the former State than in the latter, would be utterly wrong. The major difference is largely a matter of recording and reporting the serious and slight injuries. The quarrying risk or hazard in one State does

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not vary greatly from that in any other, provided the same tonnage of material is handled and an equal number of men is employed.

VALUE OF QUARRY PRODUCTS.

The following table, compiled from statistics published by the United States Geological Survey, is printed to show the magnitude of the quarrying industry in the United States.

Value of the quarry products of the United States, 1911 and 1912.

Quarry.	1911	1912	Quarry.	1911	1912
Granite [a]	$21,194,228	$20,234,041	Cement rock [b]	[c]$66,248,817	[c]$67,022,172
Traprock [a]	6,739,141	6,640,662	Slate [d]	5,728,019	6,043,318
Sandstone and bluestone [a]	7,730,868	6,893,611			
Limestone [a]	33,897,612	36,729,800	Total	149,085,403	151,350,062
Marble [a]	7,546,718	7,786,458			

[a] Burchard, E. F., Stone industry: Advance chapter from Mineral Resources U. S. for 1912, U. S. Geol. Survey, 1913.
[b] Burchard, E. F., Cement industry: Advance chapter from Mineral Resources U. S. for 1912, U. S. Geol. Survey, 1913.
[c] Value of finished product.
[d] Coons, A. T., Production of slate: Advance chapter from Mineral Resources U. S. for 1912, U. S. Geol. Survey, 1913.

DETAILED TABULATION OF ACCIDENTS.

The quarries are classified according to the rock quarried, as follows: Granite, trap rock, sandstone and bluestone, limestone, marble, cement rock, and slate. The tables show the number of persons killed, seriously injured, and slightly injured, the number of operators reporting, the number of men employed, both in and out of the quarry, the days' labor performed, and the rates of deaths and injuries per 1,000 men employed.

A summary of the more important figures for all quarries in the United States during the years 1911 and 1912 is given in Table 1. The causes of the accidents, and with the percentage of accidents due to any one cause, are given in detail in Table 2.

GRANITE QUARRIES.

The figures for granite quarries in Tables 1, 2, 3, and 4 are compiled from reports of 502 operators employing 18,935 men, of whom 12,090 were employed in the quarry and 6,845 outside of the quarry. The total number of deaths and injuries due to accidents reported is as follows: Deaths, 29, or 1.53 per 1,000 men employed; serious injuries, 127, or 6.71 per 1,000; and slight injuries, 570, or 30.10 per 1,000.

SANDSTONE QUARRIES (INCLUDING BLUESTONE).

The figures for sandstone quarries, given in Tables 1, 2, 5, and 6 are compiled from reports of 462 operators employing 9,753 men, of whom 7,240 were employed in the quarry and 2,513 outside of the quarry. The total number of deaths and injuries due to accidents reported is as follows: Deaths, 8, or 0.82 per 1,000 men employed; serious injuries, 61, or 6.25 per 1,000; and slight injuries, 251, or 25.74 per 1,000.

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LIMESTONE QUARRIES.

The figures for limestone quarries in Tables 1, 2, 7, and 8 are compiled from the reports of 1,760 operators employing 56,376 men, of whom 40,979 were employed in the quarries and 15,397 outside of the quarries. The total number of deaths and injuries due to accidents reported is as follows: Deaths, 101, or 1.79 per 1,000 men employed; serious injuries, 463, or 8.21 per 1,000; and slight injuries, 3,234, or 57.35 per 1,000.

CEMENT ROCK.

The cement-rock quarries are represented by 86 operators, who employed 9,462 men during 1912. The number of deaths and injuries due to accidents reported is as follows: Deaths 30, or 3.17 per 1,000 men employed; serious injuries, 119, or 12.58 per 1,000; and slight injuries, 1,084, or 114.56 per 1,000 (Tables 1 and 2). The high ratio of injuries in the cement-rock quarries, as compared with other quarries, is probably due to many cement quarries being operated on a large scale by large corporations that keep better records of serious and slight injuries and render more detailed reports. Many small quarries keep no record of serious and slight injuries, hence the seemingly low ratio of nonfatal accidents in quarries other than cement rock and limestone. The percentage of accidents due to any one cause is given in Tables 15, 16, and 17, and the rate per 1,000 men employed in Table 18.

QUARRY ACCIDENT STATISTICS, BY STATES.

A compilation of the quarry accident statistics, by States, is given in Tables 11, 12, 13, and 14. These tables contain the combined reports of 3,163 operators. The total number of men employed was 113,105, of whom 75,962 were employed in the quarries and 37,143 outside of the quarries. The total number of fatalities, serious injuries, and slight injuries due to accidents reported is as follows: Deaths, 213, or 1.88 per 1,000 men employed; serious injuries, 899, or 7.95 per 1,000; slight injuries, 5,653, or 49.98 per 1,000 men employed.

CAUSES AND DISTRIBUTION OF ACCIDENTS.

In Tables 15, 16, and 17 is given the percentage of accidents due to any one cause in each class of quarries and for all the quarries combined. The total for all quarries for 1911 is given in a parallel column for comparison. It will be noted, for instance, that in limestone quarries 27.72 per cent of the deaths, 9.51 per cent of the serious injuries, and 3.15 per cent of the slight injuries were due to the use of explosives. A similar comparison may be made for any class of quarries for any one of the 24 causes enumerated. These tables also show that 68 per cent of the deaths in and about the quarries are due to the following three causes in the order named: haulage, explosives, and falls or slides of quarry material and overburden.

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TABLE 1.—*Number of men employed and number of men killed and injured in and about* ***all*** *quarries in the United States in the calendar years 1912 and 1911.*

1912.

Quarries.	Active operators.	Number of employees.			Killed.						Seriously injured.						Slightly injured.						Widows.	Orphans.
					In quarry.		Outside of quarry.		Total.		In quarry.		Outside of quarry.		Total.		In quarry.		Outside of quarry.		Total.			
		In quarry.	Outside of quarry.	Total.	Number.	Rate per 1,000 employed.	Number.	Rate per 1,000 employed.	Number.	Rate per 1,000 employed.	Number.	Rate per 1,000 employed.	Number.	Rate per 1,000 employed.	Number.	Rate per 1,000 employed.	Number.	Rate per 1,000 employed.	Number.	Rate per 1,000 employed.	Number.	Rate per 1,000 employed.		
Cement rock	86	3,784	5,678	9,462	13	3.34	17	2.99	30	3.17	71	18.28	48	8.45	119	12.58	653	168.13	431	75.90	1,084	114.56	7	13
Granite	502	12,090	6,845	18,935	25	2.06	4	.58	29	1.53	98	8.11	29	4.24	127	6.71	454	37.55	116	16.95	570	30.10	11	17
Limestone	1,760	40,979	15,397	56,376	75	1.83	26	1.69	101	1.79	364	8.88	99	6.43	463	8.21	2,603	63.52	631	40.98	3,234	57.35	31	58
Marble	63	2,963	1,603	4,566	12	4,05	0	.00	12	2.63	37	12.49	7	4.36	44	9.64	116	39.15	45	28.07	161	35.26	9	6
Sandstone and bluestone	462	7,240	2,513	9,753	6	.83	2	.80	8	.82	46	6.35	15	5.97	61	6.25	200	27.62	51	20.29	251	25.74	0	0
Slate	152	4,073	3,754	7,827	16	3.93	2	.54	18	2.30	21	5.16	7	1.87	28	3.58	61	14.98	14	3.73	75	9.58	10	8
Traprock	138	4,833	1,353	6,186	14	2.90	1	.74	15	2.42	43	8.90	14	10.35	57	9.21	220	45.52	58	42.87	278	44.94	8	11
Total, 1912	3,163	75,962	37,143	113,105	161	.....	52	.....	213	.....	680	.....	219	.....	899	.....	4,307	.....	1,346	.....	5,653	.....	76	113
Average, 1912	.....	.....	.....	.....	.....	2.12	.....	1.40	.....	1.88	.....	8.95	.....	5.89	.....	7.95	.....	56.70	.....	36.24	.....	49.98	.....	.....

1911.

Cement rock	93	5,700	1,893	7,593	19	3.33	10	5.28	29	3.82	133	23.33	17	8.98	150	19.75	745	130.70	106	56.00	851	112.08	12	14
Granite	605	13,234	6,714	19,948	21	1.59	8	1.19	29	1.45	87	6.57	23	3.43	110	5.51	557	42.09	134	19.96	691	34.64	9	8
Limestone	2,144	40,740	13,836	54,576	62	1.52	28	2.02	90	1.65	363	8.91	73	5.28	436	7.99	1,851	45.43	487	35.20	2,338	42.84	48	75
Marble	80	2,383	764	3,147	2	.84	0	.00	2	.63	15	6.29	0	.00	15	4.77	94	39.45	13	17.02	107	34.00	1	0
Sandstone and bluestone	686	8,628	2,705	11,333	11	1.27	3	1.11	14	1.24	39	4.52	3	1.11	42	3.69	200	23.18	25	9.24	225	19.85	6	8
Slate	162	4,368	3,652	8,020	15	3.43	1	.27	16	1.99	28	6.41	7	1.92	35	4.36	61	13.97	13	3.56	74	9.22	9	19
Traprock	150	4,826	1,511	6,337	5	1.04	3	1.99	8	1.26	64	13.26	10	6.62	74	11.68	200	41.44	42	27.80	242	37.89	4	5
Total, 1911	3,920	79,879	31,075	110,954	135	.....	53	.....	188	.....	729	.....	133	.....	862	.....	3,708	.....	820	.....	4,528	.....	89	129
Average, 1911	.....	.....	.....	.....	.....	1.69	.....	1.71	.....	1.69	.....	9.13	.....	4.28	.....	7.77	.....	46.42	.....	26.39	.....	40.81	.....	.....

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TABLE 2.—*Number of men killed and injured in and about* ***all*** *quarries in the United States in the calendar year 1912 and the percentage of deaths and injuries due to each cause.*

Quarries.	In quarry.														Outside of quarry.												
	Falls or slides of rock or overburden.	Rock while loading at working face.	Timber or hand tools.	Explosives.	Haulage accidents.	Falling into quarry from surface, benches, or face.	Falling from hoists, derricks, ladders, etc.	Drilling accidents (by machine or hand drills).	Electricity (shock or burns).	Machinery (pumps, hoisting, and haulage machinery, not including locomotives or drills).	Flying pieces of rock from sledging.	Stepping on nail.	Other causes.	**Total killed in quarry.**	Quarry cars or locomotives.	Railway cars or locomotives.	Machinery.	Explosives.	Falls of persons.	Boiler explosions.	Timber or hand tools.	Electricity (shock or burns).	Stepping on nail.	Horse or mule.	Other causes.	**Total killed outside of quarry.**	**Grand total.**
	1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24		
Killed:																											
Cement rock	6	1	....	2	4	....	....	....	....	....	....	....	....	13	2	1	6	....	2	....	....	....	....	....	6	17	30
Granite	1	5	....	10	2	3	1	1	....	1	....	....	1	25	2	....	1	....	....	....	....	....	....	....	1	4	29
Limestone	16	3	2	26	12	5	1	1	3	3	2	....	1	75	6	6	6	2	2	....	....	....	....	2	2	26	101
Marble	4	....	....	....	5	1	....	....	....	2	....	....	....	12	....	....	....	....	....	....	....	....	....	....	....	0	12
Sandstone and bluestone	2	....	1	....	1	1	....	....	....	....	1	....	....	6	....	....	2	....	....	....	....	....	....	....	....	2	8
Slate	5	2	1	....	4	....	3	....	1	....	....	....	....	16	....	....	....	1	....	....	1	....	....	....	....	2	18
Trap rock	3	3	....	6	....	....	....	....	....	1	1	....	....	14	....	....	1	....	....	....	....	....	....	....	....	1	15
Total	37	14	4	44	28	10	5	2	4	7	4	0	2	161	10	7	16	3	4	0	1	0	0	2	9	52	213
Percentage of grand total	17.37	6.57	1.88	20.66	13.15	4.69	2.34	0.94	1.88	3.29	1.88	....	0.94	75.59	4.69	3.29	7.51	1.41	1.88	....	0.47	....	....	0.94	4.22	24.41	100.00
Percentage of class total	22.99	8.70	2.48	27.33	17.39	6.21	3.11	1.24	2.48	4.35	2.48	....	1.24	100.00	19.23	13.46	30.77	5.77	7.69	....	1.92	....	....	3.85	17.31	100.00	.....
Seriously injured:																											
Cement rock	18	9	5	6	17	2	2	4	....	3	3	....	2	71	6	10	14	....	8	....	3	1	....	2	4	48	119
Granite	14	16	7	10	12	7	6	5	....	11	5	....	5	98	3	1	7	....	4	....	4	....	....	....	10	29	127
Limestone	78	64	9	44	65	11	14	14	....	16	36	....	13	364	19	11	22	....	24	1	4	....	....	5	13	99	463
Marble	4	....	8	4	2	5	....	5	....	5	1	....	3	37	2	1	....	....	1	....	2	....	....	1	....	7	44
Sandstone and bluestone	12	2	2	2	6	5	0	3	....	6	2	....	6	46	....	3	3	1	2	....	4	....	....	1	1	15	61

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Slate	7	1	1	3	2	5	....	....	....	1	....	....	1	21	1	....	3	....	2	....	....	....	....	....	1	7	28
Trap rock	10	6	1	9	3	3	2	....	....	3	6	....	....	43	2	2	5	....	....	....	2	....	....	....	3	14	57
Total	143	98	33	78	107	38	24	31	0	45	53	0	30	680	33	28	54	1	41	1	19	1	0	9	32	219	899
Percentage of grand total	15.90	10.90	3.67	8.68	11.90	4.23	2.67	3.44	....	5.01	5.90	....	3.34	75.64	3.67	3.11	6.01	0.11	4.56	0.11	2.11	0.11	.....	1.01	3.56	24.36	100.00
Percentage of class total	21.03	14.41	4.85	11.47	15.74	5.59	3.53	4.56	....	6.62	7.79	....	4.41	100.00	15.07	12.79	24.66	.91	18.26	.46	8.67	.46	.....	4.11	14.61	100.00	.....
Slightly injured:																											
Cement rock	132	203	47	17	77	9	11	28	....	34	37	5	53	653	57	25	87	....	27	....	125	15	2	6	87	431	1,084
Granite	48	97	25	48	47	15	11	17	1	38	63	5	39	454	8	7	14	1	20	1	25	.....	7	4	29	116	570
Limestone	612	556	180	96	321	58	57	153	12	162	290	13	93	2,603	134	20	108	6	70	2	136	7	17	40	91	631	3,234
Marble	4	8	32	.....	7	1	9	24	....	11	11	....	9	116	1	.....	18	....	3	....	15	.....	1	.....	7	45	161
Sandstone and bluestone	27	30	18	6	20	6	5	8	1	22	23	3	31	200	3	1	17	1	5	....	9	.....	.....	.....	15	51	251
Slate	22	2	3	3	7	4	2	2	1	1	.....	....	14	61	1	.....	6	....	.....	....	3	.....	.....	.....	4	14	75
Trap rock	16	67	9	12	7	13	1	13	2	2	73	2	3	220	4	5	16	2	11	....	5	.....	1	.....	14	58	278
Total	861	963	314	182	486	106	96	245	17	270	497	28	242	4,307	208	58	266	10	136	3	318	22	28	50	247	1,346	5,653
Percentage of grand total	15.23	17.04	5.55	3.22	8.60	1.87	1.70	4.33	0.30	4.78	8.79	0.50	4.28	76.19	3.68	1.03	4.70	0.18	2.41	0.05	5.62	0.39	0.50	0.88	4.37	23.81	100.00
Percentage of class total	19.99	22.36	7.29	4.23	11.28	2.46	2.23	5.69	.39	6.27	11.54	.65	5.62	100.00	15.45	4.31	19.76	.74	10.11	.22	23.63	1.64	2.08	3.71	18.35	100.00	.....

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TABLE 2.—*Number of men killed and injured in and about* ***all*** *quarries in the United States in the calendar year 1912 and the percentage of deaths and injuries due to each cause.*

Quarries.	In quarry.														Outside of quarry.												Grand total.
	Falls or slides of rock or overburden.	Rock while loading at working face.	Timber or hand tools.	Explosives.	Haulage accidents.	Falling into quarry from surface, benches, or face.	Falling from hoists, derricks, ladders, etc.	Drilling accidents (by machine or hand drills).	Electricity (shock or burns).	Machinery (pumps, hoisting, and haulage machinery, not including locomotives or drills).	Flying pieces of rock from sledging.	Stepping on nail.	Other causes.	**Total killed in quarry.**	Quarry cars or locomotives.	Railway cars or locomotives.	Machinery.	Explosives.	Falls of persons.	Boiler explosions.	Timber or hand tools.	Electricity (shock or burns).	Stepping on nail.	Horse or mule.	Other causes.	**Total killed outside of quarry.**	
	1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24		
Killed:																											
Cement rock	6	1	....	2	4	....	....	....	....	....	....	....	....	**13**	2	1	6	....	2	....	....	....	....	....	6	**17**	**30**
Granite	1	5	....	10	2	3	1	1	....	1	....	....	1	**25**	2	.....	1	....	....	....	....	....	....	....	1	**4**	**29**
Limestone	16	3	2	26	12	5	1	1	3	3	2	....	1	**75**	6	6	6	2	2	....	....	....	....	2	2	**26**	**101**
Marble	4	.....	.....	.....	5	1	.....	.....	.....	2	.....	.....	.....	**12**	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	**0**	**12**
Sandstone and bluestone	2	.....	1	.....	1	1	.....	.....	.....	.....	1	.....	.....	**6**	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	**2**	**8**
Slate	5	2	1	.....	4	.....	3	.....	1	.....	.....	.....	.....	**16**	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	**2**	**18**
Trap rock	3	3	....	6	.....	.....	.....	.....	.....	1	1	.....	.....	**14**	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	**1**	**15**
Total	37	14	4	44	28	10	5	2	4	7	4	0	2	**161**	10	7	16	3	4	0	1	0	0	2	9	**52**	**213**
Percentage of grand total	17.37	6.57	1.88	20.66	13.15	4.69	2.34	0.94	1.88	3.29	1.88	....	0.94	**75.59**	4.69	3.29	7.51	1.41	1.88	....	0.47	.....	.....	0.94	4.22	**24.41**	**100.00**
Percentage of class total	22.99	8.70	2.48	27.33	17.39	6.21	3.11	1.24	2.48	4.35	2.48	....	1.24	**100.00**	19.23	13.46	30.77	5.77	7.69	....	1.92	.....	.....	3.85	17.31	**100.00**	.....
Seriously injured:																											
Cement rock	18	9	5	6	17	2	2	4	....	3	3	....	2	**71**	6	10	14	....	8	....	3	1	.....	2	4	**48**	**119**
Granite	14	16	7	10	12	7	6	5	....	11	5	....	5	**98**	3	1	7	....	4	....	4	.....	.....	.....	10	**29**	**127**
Limestone	78	64	9	44	65	11	14	14	....	16	36	....	13	**364**	19	11	22	....	24	1	4	.....	.....	5	13	**99**	**463**
Marble	4	.....	8	4	2	5	.....	5	....	5	1	....	3	**37**	2	1	.....	.....	1	....	2	.....	.....	1	.....	**7**	**44**
Sandstone and bluestone	12	2	2	2	6	5	0	3	....	6	2	....	6	**46**	.....	3	3	1	2	....	4	.....	.....	1	1	**15**	**61**

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Slate	7	1	1	3	2	5	....	....	....	1	.....	....	1	**21**	1	.....	3	.....	2	.....	.....	.....	.....	.....	1	**7**	**28**
Trap rock	10	6	1	9	3	3	2	....	....	3	6	....	....	**43**	2	2	5	.....	.....	.....	2	.....	.....	.....	3	**14**	**57**
Total	143	98	33	78	107	38	24	31	0	45	53	0	30	**680**	33	28	54	1	41	1	19	1	0	9	32	**219**	**899**
Percentage of grand total	15.90	10.90	3.67	8.68	11.90	4.23	2.67	3.44	....	5.01	5.90	....	3.34	**75.64**	3.67	3.11	6.01	0.11	4.56	0.11	2.11	0.11	.....	1.01	3.56	**24.36**	**100.00**
Percentage of class total	21.03	14.41	4.85	11.47	15.74	5.59	3.53	4.56	....	6.62	7.79	....	4.41	**100.00**	15.07	12.79	24.66	.91	18.26	.46	8.67	.46	.....	4.11	14.61	**100.00**	.....
Slightly injured:																											
Cement rock	132	203	47	17	77	9	11	28	....	34	37	5	53	**653**	57	25	87	....	27	....	125	15	2	6	87	**431**	**1,084**
Granite	48	97	25	48	47	15	11	17	1	38	63	5	39	**454**	8	7	14	1	20	1	25	.....	7	4	29	**116**	**570**
Limestone	612	556	180	96	321	58	57	153	12	162	290	13	93	**2,603**	134	20	108	6	70	2	136	7	17	40	91	**631**	**3,234**
Marble	4	8	32	.....	7	1	9	24	....	11	11	....	9	**116**	1	.....	18	....	3	....	15	.....	1	.....	7	**45**	**161**
Sandstone and bluestone	27	30	18	6	20	6	5	8	1	22	23	3	31	**200**	3	1	17	1	5	....	9	.....	.....	.....	15	**51**	**251**
Slate	22	2	3	3	7	4	2	2	1	1	.....	....	14	**61**	1	.....	6	....	.....	....	3	.....	.....	.....	4	**14**	**75**
Trap rock	16	67	9	12	7	13	1	13	2	2	73	2	3	**220**	4	5	16	2	11	....	5	.....	1	.....	14	**58**	**278**
Total	861	963	314	182	486	106	96	245	17	270	497	28	242	**4,307**	208	58	266	10	136	3	318	22	28	50	247	**1,346**	**5,653**
Percentage of grand total	15.23	17.04	5.55	3.22	8.60	1.87	1.70	4.33	0.30	4.78	8.79	0.50	4.28	**76.19**	3.68	1.03	4.70	0.18	2.41	0.05	5.62	0.39	0.50	0.88	4.37	**23.81**	**100.00**
Percentage of class total	19.99	22.36	7.29	4.23	11.28	2.46	2.23	5.69	.39	6.27	11.54	.65	5.62	**100.00**	15.45	4.31	19.76	.74	10.11	.22	23.63	1.64	2.08	3.71	18.35	**100.00**	.....

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TABLE 3.—*Number of men killed in and about the* ***granite*** *quarries in the United States in the calendar year 1912, with the fatalities classified according to cause.*

State.	In quarry.													Outside of quarry.										Grand total.
	Falls or slides of rock or overburden.	Rock while loading at working face.	Timber or hand tools.	Explosives.	Haulage accidents.	Falling into quarry from surface, benches, or face.	Falling from hoists, derricks, ladders, etc.	Drilling accidents (by machine or hand drills).	Electricity (shock or burns).	Machinery (pumps, hoisting, and haulage machinery, not including locomotives or drills).	Flying pieces of rock from sledging.	Stepping on nail.	Other causes.	Total killed in quarry.	Quarry cars or locomotives.	Railway cars or locomotives.	Machinery.	Explosives.	Falls of persons.	Boiler explosions.	Timber or hand tools.	Electricity (shock or burns).	Stepping on nail.	Horse or mule.	Other causes.	Total killed outside of quarry.	
	1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24		
Arizona	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....	....	....	0	0
California	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....	....	1	1	1
Colorado	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....	....	....	0	0
Connecticut	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....	....	....	0	0
Georgia	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....	....	....	0	0
Maine	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....	....	....	0	0
Maryland	....	....	....	1	....	1	1	....	....	....	....	....	....	3	1	....	....	....	....	....	....	....	....	....	....	1	4
Massachusetts	....	3	....	....	....	....	....	1	....	....	....	....	....	4	1	....	....	....	....	....	....	....	....	....	....	1	5
Minnesota	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	1	....	....	....	....	....	....	....	....	1	1
Missouri	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....	....	....	0	0
New Hampshire	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....	....	....	0	0
New Jersey	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....	....	....	0	0
New York	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....	....	....	0	0
North Carolina	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....	....	....	0	0
Oregon	....	....	....	1	....	....	....	....	....	1	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	0	2
Pennsylvania	....	....	....	2	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	0	2
Rhode Island	....	....	....	....	1	1	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	0	2
South Carolina	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....	....	....	0	0
Texas	....	....	....	....	....	....	....	....	....	....	....	....	....	0	....	....	....	....	....	....	....	....	....	....	....	0	0
Vermont	....	2	....	2	1	1	....	....	....	....	....	....	....	6	....	....	....	....	....	....	....	....	....	....	....	0	6
Virginia	....	....	....	2	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	0	2
Washington	1	....	....	2	....	....	....	....	....	....	....	....	1	4	....	....	....	....	....	....	....	....	....	....	....	0	4

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Wisconsin															0													0	0
Other States [a]															0													0	0
Total, 1912	1	5	0	10	2	3	1	1	0	1	0	0	1	25	2	0	1	0	0	0	0	0	0	0	0	1	4	29
Total, 1911	10		(b)	5	2	2		(b)	0	(b)	(b)	(b)	2	21	1	3	2	0	(b)	0	(b)	0	0	(b)	(b)	2	8	29

[a] Includes Arkansas, Delaware, Idaho, Montana, Nevada, New Mexico, Oklahoma, South Dakota, and Utah. [b] Not segregated.

TABLE 4.—*Number of men employed, number of days worked, and number of men killed per 1,000 employed in and about the* ***granite*** *quarries in the United States in the calendar year 1912.*

State.	Number of active operators.	Employees.			Days' work performed.	Average number of days worked.	Number killed.		Widows.	Orphans.
		In quarry.	Outside of quarry.	Total.			Total.	Per 1,000 employed.		
Arizona	4	11	1	12	1,160	92	0	.....	0	0
California	41	731	364	1,095	320,499	293	1	0.91	1	1
Colorado	6	46	5	51	10,030	197	0	.....	0	0
Connecticut	31	533	411	944	238,451	253	0	.....	0	0
Georgia	19	901	182	1,083	282,520	261	0	.....	0	0
Maine	54	657	671	1,328	256,444	193	0	.....	0	0
Maryland	13	738	215	953	234,361	246	4	4.20	2	0
Massachusetts	73	1,287	1,441	2,728	675,283	248	5	1.83	0	0
Minnesota	29	444	319	763	190,451	250	1	1.31	0	0
Missouri	5	113	20	133	21,840	164	0	.....	0	0
New Hampshire	27	657	764	1,421	337,477	237	0	.....	0	0
New Jersey	9	164	28	192	46,170	240	0	.....	0	0
New York [a]	7	86	6	92	17,756	193	0	.....	0	0
North Carolina	22	744	182	926	238,379	257	0	.....	0	0
Oregon	14	165	64	229	32,769	143	2	8.73	0	0
Pennsylvania	26	697	251	948	228,970	242	2	2.11	2	0
Rhode Island	15	445	491	936	254,236	272	2	2.14	1	0
South Carolina	9	300	63	363	94,315	260	0	.....	0	0
Texas	7	90	27	117	34,069	291	0	.....	0	0
Vermont	26	1,274	117	1,391	406,185	292	6	4.31	3	10
Virginia	21	590	62	652	158,528	243	2	3.07	1	2
Washington	12	478	89	567	151,233	267	4	7.05	1	4
Wisconsin	14	494	914	1,408	308,732	219	0	.....	0	0
Other States [b]	18	445	158	603	120,436	200	0	.....	0	0
Total 1912	502	12,090	6,845	18,935	4,660,234	246	29	1.53	11	17
Total 1911	605	13,234	6,714	19,948	4,527,863	227	29	1.45	9	8

[a] Fatalities and employees reported by W. W. Jones, State mine inspector, Albany, N. Y. Segregation of inside and outside employees from returns for 1911.
[b] Includes Arkansas, Delaware, Idaho, Montana, Nevada, New Mexico, Oklahoma, South Dakota, and Utah.

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TABLE 5.—*Number of men killed in and about the* ***sandstone*** [a] *quarries in the United States in the calendar year 1912, with the fatalities classified according to cause.*

State.	In quarry.														Outside of quarry.												Grand total.
	Falls or slides of rock or overburden.	Rock while loading at working face.	Timber or hand tools.	Explosives.	Haulage accidents.	Falling into quarry from surface, benches, or face.	Falling from hoists, derricks, ladders, etc.	Drilling accidents (by machine or hand drills).	Electricity (shock or burns).	Machinery (pumps, hoisting, and haulage machinery, not including locomotives or drills).	Flying pieces of rock from sledging.	Stepping on nail.	Other causes.	Total killed in quarry.	Quarry cars or locomotives.	Railway cars or locomotives.	Machinery.	Explosives.	Falls of persons.	Boiler explosions.	Timber or hand tools.	Electricity (shock or burns).	Stepping on nail.	Horse or mule.	Other causes.	Total killed outside of quarry.	
	1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24		
Arizona														0												0	0
Arkansas														0												0	0
California														0												0	0
Colorado														0												0	0
Connecticut														0												0	0
Idaho														0												0	0
Illinois														0												0	0
Indiana														0												0	0
Iowa														0												0	0
Kansas														0												0	0
Kentucky														0												0	0
Massachusetts	1													1			1									1	2
Minnesota														0												0	0
Missouri														0												0	0
Montana														0												0	0
New Jersey														0												0	0
New York														0												0	0
Ohio											1			1			1									1	2
Pennsylvania	1					1								2												0	2
South Dakota					1									1												0	1
Utah														0												0	0
Washington			1											1												0	1
West Virginia														0												0	0
Wisconsin														0												0	0

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Wyoming																0													0	0
Other States [b]																0													0	0
Total, 1912	2	0	1	0	1	1	0	0	0	0	1	0	0	6	0	0	2	0	0	0	0	0	0	0	0	2	8
Total, 1911	2	0	0	1	3	5		0	0	0	0	0	0	11	0	0	1	0	0	2	0	0	0	0	0	3	14

[a] Includes bluestone. [b] Includes Alabama, Maryland, Michigan, Nevada, New Hampshire, New Mexico, North Carolina, Oklahoma, Texas, Vermont, and Virginia.

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TABLE 6.—*Number of men employed, number of days worked, and number of men killed per 1,000 employed in and about the* ***sandstone*** [a] *quarries in the United States in the calendar year 1912.*

State.	Number of active operators.	Employees.			Days' work performed.	Average number of days worked.	Number killed.		Widows.	Orphans.
		In quarry.	Outside of quarry.	Total.			Total.	Per 1,000 employed.		
Arizona	4	108	0	108	32,380	300	0		0	0
Arkansas	20	174	19	193	35,596	184	0		0	0
California	10	35	6	41	4,503	110	0		0	0
Colorado	20	177	43	220	53,002	241	0		0	0
Connecticut	6	183	12	195	48,010	246	0		0	0
Idaho	5	34	53	87	16,878	194	0		0	0
Illinois	5	49	8	57	11,899	209	0		0	0
Indiana	5	64	9	73	13,060	179	0		0	0
Iowa	6	17	2	19	248	13	0		0	0
Kansas	5	13	67	80	8,610	108	0		0	0
Kentucky	9	136	31	167	31,075	186	1	5.99	0	0
Massachusetts	10	174	67	241	65,454	272	1	4.15	0	0
Minnesota	5	207	100	307	78,684	256	0		0	0
Missouri	4	26	0	26	4,926	189	0		0	0
Montana	5	41	10	51	10,473	205	0		0	0
New Jersey	8	106	13	119	26,455	222	0		0	0
New York [b]	44	391	130	521	101,074	194	0		0	0
Ohio	48	2,069	627	2,696	613,939	228	2	.74	1	0
Pennsylvania	156	1,747	633	2,380	486,500	204	2	.84	1	0
South Dakota	11	128	3	131	28,750	219	1	7.63	1	4
Utah	6	27	12	39	5,142	132	0		0	0
Washington	4	385	320	705	128,450	182	1	1.42	1	3
West Virginia	19	251	76	327	57,423	176	0		0	0
Wisconsin	24	271	194	465	120,144	258	0		0	0
Wyoming	4	34	0	34	2,132	63	0		0	0
Other States [c]	19	393	78	471	83,132	176	0		0	0
Total, 1912	462	7,240	2,513	9,753	2,067,939	212	8	.82	4	7
Total, 1911	686	8,628	2,705	11,333	2,309,256	204	14	1.24	6	8

[a] Includes bluestone.
[b] Fatalities and employees reported by W. W. Jones, State mine inspector, Albany, N. Y. Segregation of inside and outside employees based on returns for 1911.
[c] Includes Alabama, Maryland, Michigan, Nevada, New Hampshire, New Mexico, North Carolina, Oklahoma, Texas, Vermont, and Virginia.

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TABLE 7.—*Number of men killed in and about the* ***limestone*** *quarries in the United States in the calendar year 1912, with the fatalites classified according to cause.*

State.	In quarry.													Outside of quarry.										Grand total.
	Falls or slides of rock or overburden.	Rock while loading at working face.	Timber or hand tools.	Explosives.	Haulage accidents.	Falling into quarry from surface, benches, or face.	Falling from hoists, derricks, ladders, etc.	Drilling accidents (by machine or hand drills).	Electricity (shock or burns).	Machinery (pumps, hoisting, and haulage machinery, not including locomotives or drills).	Flying pieces of rock from sledging.	Stepping on nail.	Other causes.	Total killed in quarry.	Quarry cars or locomotives.	Railway cars or locomotives.	Machinery.	Explosives.	Falls of persons.	Boiler explosions.	Timber or hand tools.	Electricity (shock or burns).	Stepping on nail.	Horse or mule.	Other causes.	Total killed outside of quarry.	
	1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24		
Alabama														0	1										1	1
Arizona	0													0											0	0
Arkansas														0		1			1						2	2
California				1										1											0	1
Colorado						1								1											0	1
Connecticut														0											0	0
Georgia														0											0	0
Idaho														0											0	0
Illinois	2		1		1				2					6	1	1							1		3	9
Indiana				5										5			1								1	6
Iowa				1			1							2											0	2
Kansas				2		1								3											0	3
Kentucky				1						1	2			4	2		1								3	7
Maine	2													2											0	2
Maryland														0			2								2	2
Massachusetts														0											0	0
Michigan				1	1									2	1										1	3
Minnesota														0			1								1	1
Missouri	2			3		1		1					1	8											0	8
Montana	1													1											0	1
Nebraska														0											0	0
New Jersey	1													1											0	1

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New Mexico				1										1	1												1	2		
New York [a]	1	1		6	5									13													0	13		
North Carolina														0													0	0		
Ohio	2			2						1				5												1	1	6		
Oklahoma														0													0	0		
Pennsylvania	4	1	1	2	4	1				1				14		2		1							1	1	5	19		
South Dakota														0													0	0		
Tennessee	1	1				1								3													0	3		
Texas														0				1									1	1		
Utah														0													0	0		
Vermont														0		1											1	1		
Virginia														0													0	0		
Washington														0													0	0		
West Virginia					1				1					2		1	1		1								3	5		
Wisconsin				1										1													0	1		
Wyoming														0													0	0		
Other States [b]														0													0	0		
Total 1912	16	3	2	26	12	5	1	1	3	3	2	....	1	75	6	6	6	2	2	0	0	0	0	2	2	26	101		
	19		(c)	27	9	6		(c)	0	(c)	(c)	....	1	62	6	3	11	3	(c)	1	(c)	2	(c)	(c)	2	28	90		
Total 1911																														

[a] Reported by W. W. Jones, State mine inspector, Albany, N. Y.
[b] Includes Florida, Louisiana, Nevada, Oregon, Rhode Island, and South Carolina.
[c] Not segregated.

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TABLE 8.—*Number of men employed, number of days worked, and number of men killed per 1,000 employed in and about the* ***limestone*** *quarries in the United States in the calendar year 1912.*

State.	Number of active operators.	Employees.			Days' work performed.	Average number of days worked.	Number killed.		Widows.	Orphans.
		In quarry.	Outside of quarry.	Total.			Total.	Per 1,000 employed.		
Alabama	24	890	566	1,456	416,047	286	1	0.69	0	0
Arizona	4	60	50	110	36,094	328	0	.00	0	0
Arkansas	11	328	97	425	125,628	296	2	4.71	0	0
California	25	460	140	600	176,725	295	1	1.67	0	0
Colorado	10	352	37	389	109,365	281	1	2.57	0	0
Connecticut	6	102	71	173	49,465	286	0	.....	0	0
Georgia	7	124	70	194	36,387	188	0	.....	0	0
Idaho	9	55	22	77	20,920	275	0	.....	0	0
Illinois	80	2,874	983	3,857	923,879	240	9	2.33	6	14
Indiana	95	3,817	1,620	5,437	1,351,782	249	6	1.10	2	0
Iowa	62	1,024	186	1,210	359,298	297	2	1.65	1	6
Kansas	53	1,106	290	1,396	266,366	191	3	2.15	2	6
Kentucky	77	1,558	496	2,054	416,806	203	7	3.41	3	5
Maine	4	213	56	269	82,476	307	2	7.43	0	0
Maryland	40	829	641	1,470	402,781	274	2	1.36	0	0
Massachusetts	10	182	309	491	145,528	296	0	.....	0	0
Michigan	22	797	395	1,192	286,488	240	3	2.52	1	1
Minnesota	39	705	589	1,294	311,034	240	1	.77	0	0
Missouri	121	2,488	1,023	3,511	883,632	252	8	2.28	3	4
Montana	7	85	8	93	27,330	294	1	10.75	0	0
Nebraska	12	421	109	530	100,141	189	0	.00	0	0
New Jersey	19	521	56	577	151,140	262	1	1.73	1	3
New Mexico	5	321	45	366	83,831	229	2	5.46	1	5
New York *a*	109	2,506	642	3,148	667,376	212	13	4.13	(*b*)	(*b*)
North Carolina	6	171	46	217	52,700	243	0	.....	0	0
Ohio	142	3,746	1,515	5,261	1,241,436	236	6	1.14	4	7
Oklahoma	14	417	275	692	200,714	290	0	.....	0	0
Pennsylvania	440	8,356	2,178	10,534	2,659,907	253	19	1.80	6	5
South Dakota	7	46	9	55	7,450	135	0	.....	0	0
Tennessee	56	1,363	536	1,899	415,397	219	3	1.58	1	2
Texas	28	900	343	1,243	293,273	236	1	.80	0	0
Utah	19	244	79	323	88,972	275	0	.00	0	0
Vermont	13	107	72	179	45,731	255	1	5.59	0	0
Virginia	39	725	480	1,205	321,434	267	0	.....	0	0
Washington	8	59	99	158	43,262	274	0	.....	0	0
West Virginia	26	1,432	748	2,180	579,188	266	5	2.29	1	3

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Wisconsin	97	1,355	387	1,742	402,433	231	1	.57	0	0
Wyoming	4	116	.....	116	17,376	150	0	.....	0	0
Other States c	10	124	129	253	66,921	265	0	.....	0	0
Total, 1912	1,760	40,979	15,397	56,376	13,866,713	246	101	1.79	32	61
Total, 1911	2,144	40,740	13,836	54,576	12,240,691	224	90	1.65	48	75

a Fatalities and employees reported by W. W. Jones, State mine inspector, Albany, N. Y. Segregation of inside and outside employees based on returns for 1911.
b Not reported.
c Includes Florida, Louisiana, Nevada, Oregon, Rhode Island, and South Carolina.

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TABLE 8.—*Number of men employed, number of days worked, and number of men killed per 1,000 employed in and about the* ***limestone*** *quarries in the United States in the calendar year 1912.*

State.	Number of active operators.	Employees.			Days' work performed.	Average number of days worked.	Number killed.		Widows.	Orphans.
		In quarry.	Outside of quarry.	Total.			Total.	Per 1,000 employed.		
Alabama	24	890	566	1,456	416,047	286	1	0.69	0	0
Arizona	4	60	50	110	36,094	328	0	.00	0	0
Arkansas	11	328	97	425	125,628	296	2	4.71	0	0
California	25	460	140	600	176,725	295	1	1.67	0	0
Colorado	10	352	37	389	109,365	281	1	2.57	0	0
Connecticut	6	102	71	173	49,465	286	0	.....	0	0
Georgia	7	124	70	194	36,387	188	0	.....	0	0
Idaho	9	55	22	77	20,920	275	0	.....	0	0
Illinois	80	2,874	983	3,857	923,879	240	9	2.33	6	14
Indiana	95	3,817	1,620	5,437	1,351,782	249	6	1.10	2	0
Iowa	62	1,024	186	1,210	359,298	297	2	1.65	1	6
Kansas	53	1,106	290	1,396	266,366	191	3	2.15	2	6
Kentucky	77	1,558	496	2,054	416,806	203	7	3.41	3	5
Maine	4	213	56	269	82,476	307	2	7.43	0	0
Maryland	40	829	641	1,470	402,781	274	2	1.36	0	0
Massachusetts	10	182	309	491	145,528	296	0	.....	0	0
Michigan	22	797	395	1,192	286,488	240	3	2.52	1	1
Minnesota	39	705	589	1,294	311,034	240	1	.77	0	0
Missouri	121	2,488	1,023	3,511	883,632	252	8	2.28	3	4
Montana	7	85	8	93	27,330	294	1	10.75	0	0
Nebraska	12	421	109	530	100,141	189	0	.00	0	0
New Jersey	19	521	56	577	151,140	262	1	1.73	1	3
New Mexico	5	321	45	366	83,831	229	2	5.46	1	5
New York [a]	109	2,506	642	3,148	667,376	212	13	4.13	(b)	(b)
North Carolina	6	171	46	217	52,700	243	0	.....	0	0
Ohio	142	3,746	1,515	5,261	1,241,436	236	6	1.14	4	7
Oklahoma	14	417	275	692	200,714	290	0	.....	0	0
Pennsylvania	440	8,356	2,178	10,534	2,659,907	253	19	1.80	6	5
South Dakota	7	46	9	55	7,450	135	0	.....	0	0
Tennessee	56	1,363	536	1,899	415,397	219	3	1.58	1	2
Texas	28	900	343	1,243	293,273	236	1	.80	0	0
Utah	19	244	79	323	88,972	275	0	.00	0	0
Vermont	13	107	72	179	45,731	255	1	5.59	0	0
Virginia	39	725	480	1,205	321,434	267	0	.....	0	0
Washington	8	59	99	158	43,262	274	0	.....	0	0
West Virginia	26	1,432	748	2,180	579,188	266	5	2.29	1	3

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Wisconsin	97	1,355	387	1,742	402,433	231	1	.57	0	0
Wyoming	4	116	.....	116	17,376	150	0	.....	0	0
Other States [c]	10	124	129	253	66,921	265	0	.....	0	0
Total, 1912	1,760	40,979	15,397	56,376	13,866,713	246	101	1.79	32	61
Total, 1911	2,144	40,740	13,836	54,576	12,240,691	224	90	1.65	48	75

[a] Fatalities and employees reported by W. W. Jones, State mine inspector, Albany, N. Y. Segregation of inside and outside employees based on returns for 1911.
[b] Not reported.
[c] Includes Florida, Louisiana, Nevada, Oregon, Rhode Island, and South Carolina.

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TABLE 9.—*Number of men killed in and about the* ***cement rock, marble, slate,*** *and* ***trap rock*** *quarries in the United States in the calendar year 1912.*

State.	In quarry.														Outside of quarry.												Grand total.
	Falls or slides of rock or overburden.	Rock while loading at working face.	Timber or hand tools.	Explosives.	Haulage accidents.	Falling into quarry from surface, benches, or face.	Falling from hoists, derricks, ladders, etc.	Drilling accidents (by machine or hand drills).	Electricity (shock or burns).	Machinery (pumps, hoisting, and haulage machinery, not including locomotives or drills).	Flying pieces of rock from sledging.	Stepping on nail.	Other causes.	**Total killed in quarry.**	Quarry cars or locomotives.	Railway cars or locomotives.	Machinery.	Explosives.	Falls of persons.	Boiler explosions.	Timber or hand tools.	Electricity (shock or burns).	Stepping on nail.	Horse or mule.	Other causes.	**Total killed outside of quarry.**	
	1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24		
Alabama					1									**1**												**0**	**1**
California	4				1									**5**												**0**	**5**
Colorado	2				4									**6**												**0**	**6**
Illinois					2									**2**												**0**	**2**
Kansas		1												**1**											1	**1**	**2**
Maryland					1									**1**												**0**	**1**
Massachusetts											1			**1**			1									**1**	**2**
Missouri														**0**	1											**1**	**1**
New Jersey	1	1			1					1				**4**		1									1	**2**	**6**
New York [a]		1		1										**2**												**0**	**2**
Pennsylvania	3	3	1	7	1		2		1					**18**			2	1	1						4	**8**	**26**
Tennessee										2				**2**			1									**1**	**3**
Texas														**0**			1		1							**2**	**2**
Utah														**0**			1									**1**	**1**
Vermont	6				1	1	1							**9**												**0**	**9**
Virginia					1									**1**	1						1					**2**	**3**
Washington	1													**1**			1									**1**	**2**
West Virginia	1													**1**												**0**	**1**
Total, 1912	18	6	1	8	13	1	3	0	1	3	1	0	0	**55**	2	1	7	1	2	0	1	0	0	0	6	**20**	**75**
Total, 1911	17		(b)	13	6	3		(b)	0	(b)	(b)	(b)	3	**42**	4	1	3	1	(b)	0	(b)	0	(b)	(b)	4	**13**	**55**

[a] Reported by W. W. Jones, State mine inspector.

[b] Not segregated.

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TABLE 10.—*Number of men employed, number of days worked, and number of men killed per 1,000 employed in and about the* ***cement rock, marble, slate,*** *and* ***trap rock*** *quarries in the United States in the calendar year 1912.*

State.	Active operators.	Employees.			Days' work performed.	Average number of days worked.	Number killed.		Widows.	Orphans.
		In quarry.	Outside of quarry.	Total.			Total.	Per 1,000 employed.		
Alabama	4	257	161	418	125,556	300	1	2.39	1	0
California	46	1,700	976	2,676	751,417	281	5	1.87	2	3
Colorado	3	295	520	815	280,375	344	6	7.36	5	6
Connecticut	6	404	71	475	122,715	258	0	.....	0	0
Georgia	8	297	422	719	171,276	238	0	.....	0	0
Illinois	5	176	63	239	73,264	307	2	8.37	0	0
Kansas	10	317	689	1,006	210,109	209	2	1.99	0	0
Maine	5	163	154	317	89,460	282	0	.....	0	0
Maryland	8	305	274	579	166,912	288	1	1.73	1	3
Massachusetts	29	660	167	827	203,614	246	2	2.42	1	2
Michigan	7	83	326	409	98,820	242	0	.....	0	0
Minnesota	3	60	34	94	23,332	248	0	.....	0	0
Missouri	4	144	249	393	102,584	261	1	2.54	0	0
New Jersey	45	1,714	1,164	2,878	722,234	251	6	2.08	4	6
New York [a]	21	486	441	927	193,972	209	2	2.16	(b)	(b)
Ohio	3	35	29	64	17,473	273	0	.....	0	0
Pennsylvania	113	4,155	3,828	7,983	2,269,780	284	26	3.26	10	11
Tennessee	19	1,165	107	1,272	328,740	258	3	2.36	1	0
Texas	4	111	342	453	103,402	228	2	4.42	0	0
Utah	6	78	178	256	74,800	292	1	3.91	0	0
Vermont	58	2,112	916	3,028	822,132	272	9	2.97	5	1
Virginia	9	304	623	927	295,055	318	3	3.24	3	2
Washington	4	156	113	269	75,926	282	2	7.43	0	0
Other States east of Mississippi River [c]	7	224	383	607	164,695	271	1	1.65	1	4
Other States west of Mississippi River [d]	12	252	158	410	68,514	167	0	.....	0	0
Total, 1912	439	15,653	12,388	28,041	7,556,157	269	75	2.67	34	38
Total, 1911	485	17,277	7,820	25,097	6,247,284	249	55	2.19	26	38

[a] Fatalities and employees reported by W. W. Jones, State mine inspector, Albany, N. Y. Segregation of inside and outside employees based on returns for 1911.
[b] Not reported.
[c] Includes Indiana, Kentucky, North Carolina, West Virginia, and Wisconsin.
[d] Includes Arizona, Arkansas, Idaho, Iowa, Montana, Nevada, New Mexico, Oklahoma, Oregon, and Wyoming.

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TABLE 11.—*Number of men killed in and about* **all** *quarries in the United States in the calendar year 1912, with the fatalities classified according to cause.*

State.	In quarry.																Outside of quarry.												Grand total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	Total killed in quarry.	14	15	16	17	18	19	20	21	22	23	24	Total killed outside of quarry.	
	Falls or slides of rock or overburden.	Rock while loading at working face.	Timber or hand tools.	Explosives.	Haulage accidents.	Falling into quarry from surface, benches, or face.	Falling from hoists, derricks, hadders, etc.	Drilling accidents (by machine or hand drills).	Electricity (shock or burns).	Machinery (pumps, hoisting, and haulage machinery, not including locomotives or drills).	Flying pieces of rock from sledging.	Stepping on nail.	Other causes.		Quarry cars or locomotives.	Railway cars or locomotives.	Machinery.	Explosives.	Falls of persons.	Boiler explosions.	Timber or hand tools.	Electricity (shock or burns).	Stepping on nail.	Horse or mule.	Other causes.		
Alabama					1									1	1											1	2
Arizona																											
Arkansas					1									1													1
California	4			1	1									6		1			1						1	2	8
Colorado	2				4	1								7													7
Connecticut																											
Georgia																											
Idaho																											
Illinois	2		1		3				2					8	1	1								1		3	11
Indiana				5		1	1							6			1									1	7
Iowa				1	1									2													2
Kansas		1		2	1	1								5													5
Kentucky				1						1	2			4	2		2									4	8
Maine	2													2													2
Maryland				1	1	1	1							4	1		2									3	7
Massachusetts	1	3						1			1			6	1		1									2	8
Michigan				1	1									2	1											1	3
Minnesota																											
Missouri	2			3		1		1					1	8	1		2									3	11
Montana	1													1													1
Nebraska																											
New Hampshire					1					1				2		1										1	3
New Jersey	2	1												3													3
New Mexico				1										1	1											1	2

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New York [a]	1	2		7	5									15											0	15
North Carolina														0											0	0
Ohio	2			2						1	1			6			1							1	2	8
Oklahoma														0											0	0
Oregon				1						1				2											0	2
Pennsylvania	8	4	2	11	5	2	2		1	1				36		2	2	2	1				1	5	13	49
Rhode Island					1	1								2											0	2
South Carolina														0											0	0
South Dakota					1									1											0	1
Tennessee	1	1				1				2				5			1								1	6
Texas														0			1	1	1						3	3
Utah														0			1								1	1
Vermont	6	2		2	2	2	1							15		1									1	16
Virginia				2	1									3	1							1			2	5
Washington	2		1	2									1	6			1								1	7
West Virginia	1				1				1					3		1	1		1						3	6
Wisconsin				1										1											0	1
Wyoming														0											0	0
Other States [b]														0											0	0
Total 1912	37	14	4	44	28	10	5	2	4	7	4	0	2	161	10	7	16	3	4	0	1	0	0	2	9	52	213
Total 1911	48		(c)	46	20	16		(c)	0	(c)	(c)	(c)	6	136	11	7	17	4	(c)	3	(c)	2	(c)	(c)	8	52	188

[a] Reported by W. W. Jones, State mine inspector, Albany, N. Y. [b] Includes Delaware, Florida, Louisiana, and Nevada. [c] Not segregated in 1911.

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TABLE 12.—*Number of men seriously injured in and about* ***all*** *quarries in the United States during 1912, with the injuries classified according to cause.*

State.	In quarry.														Outside of quarry.												Grand total.
	Falls or slides of rock or overburden.	Rock while loading at working face.	Timber or hand tools.	Explosives.	Haulage accidents.	Falling into quarry from surface, benches, or face.	Falling from hoists, derricks, ladders, etc.	Drilling accidents (by machine or hand drills).	Electricity (shock or burns).	Machinery (pumps, hoisting, and haulage machinery, not including locomotives or drills).	Flying pieces of rock from sledging.	Stepping on nail.	Other causes.	Total seriously injured.	Quarry cars or locomotives.	Railway cars or locomotives.	Machinery.	Explosives.	Falls of persons.	Boiler explosions.	Timber or hand tools.	Electricity (shock or burns).	Stepping on nail.	Horse or mule.	Other causes.	Total seriously injured.	
	1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24		
Alabama	1	....	3	....	2	2	....	1	....	1	1	....	....	11	....	....	....	....	....	....	2	....	....	....	....	2	13
Arizona	....	....	....	....	1	1	....	1	....	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	0	3
Arkansas	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	1
California	9	5	....	8	6	1	2	1	....	2	3	....	....	37	1	2	8	....	3	....	1	1	....	....	1	17	54
Colorado	2	....	....	....	2	....	....	....	....	....	1	....	....	5	....	....	....	....	....	....	....	....	....	....	....	....	5
Connecticut	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	1	2
Georgia	....	....	....	1	....	....	....	....	....	1	1	....	....	3	....	1	1	....	....	....	....	....	....	....	....	2	5
Illinois	18	4	4	1	17	3	1	2	....	2	2	....	1	55	2	5	8	....	5	....	....	....	....	1	....	21	76
Indiana	2	4	....	2	2	....	1	3	....	....	....	....	2	16	6	3	5	....	6	....	2	....	....	1	5	28	44
Iowa	1	1	....	....	3	....	1	....	....	....	1	....	2	9	....	....	....	....	....	....	....	....	....	....	....	....	9
Kansas	3	....	1	....	3	....	....	....	....	....	....	....	....	7	....	....	....	....	2	....	....	....	....	....	....	2	9
Kentucky	4	1	....	3	3	....	....	....	....	1	....	....	1	13	....	....	2	....	....	1	....	....	....	....	....	3	16
Maine	5	1	....	....	2	1	2	1	....	1	....	....	2	15	1	....	....	....	2	....	....	....	....	....	2	5	20
Maryland	3	2	....	3	3	....	....	3	....	1	1	....	....	16	2	....	3	....	....	....	1	....	....	....	1	7	23
Massachusetts	6	5	1	....	....	2	4	2	....	2	2	....	1	25	2	....	3	....	2	....	1	....	....	....	3	11	36
Michigan	1	2	4	5	5	....	....	1	....	3	....	....	1	22	....	1	1	....	2	....	2	....	....	....	1	7	29
Minnesota	....	1	1	....	....	2	2	....	....	2	....	....	....	8	....	....	1	....	1	....	....	....	....	....	1	3	11
Missouri	10	4	....	2	3	3	....	2	....	....	2	....	....	26	1	....	....	....	1	....	1	....	....	....	....	3	29
Montana	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	1	2
Nebraska	....	....	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1
New Hampshire	2	1	....	2	3	....	1	....	....	1	....	....	....	10	....	....	....	....	....	....	....	....	....	....	2	2	12
New Jersey	3	10	....	....	6	2	....	1	....	2	4	....	....	28	1	6	1	....	....	....	....	....	....	....	3	11	39
New Mexico	....	1	....	....	....	....	....	....	....	....	....	....	....	1	1	1	....	....	....	....	....	....	....	....	1	3	4
New York [a]	....	15	....	5	4	....	....	2	....	3	1	....	2	32	....	1	....	....	....	....	2	....	....	1	....	4	36

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North Carolina	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1
Ohio	5	7	1	11	13	2	5	3	....	5	....	....	....	52	6	2	3	....	4	....	2	....	....	2	5	24	76
Oklahoma	....	1	....	1	....	....	....	....	....	1	....	....	....	3	....	....	1	....	....	....	....	....	....	....	....	1	4
Pennsylvania	27	7	5	14	11	3	....	1	....	3	7	....	5	83	5	4	14	1	9	....	3	....	....	2	4	42	125
Rhode Island	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1
South Carolina	....	....	....	....	....	....	....	....	....	2	....	....	1	3	....	....	....	....	....	....	....	....	....	....	....	....	3
Tennessee	15	2	....	4	3	2	....	....	....	1	21	....	2	50	2	....	....	....	....	....	....	....	....	....	....	2	52
Texas	....	....	1	....	....	1	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	1	1	3
Utah	1	2	....	....	....	2	....	....	....	....	....	....	....	5	....	2	....	....	....	....	....	....	....	....	....	2	7
Vermont	6	1	8	6	2	8	....	4	....	6	....	....	3	44	....	....	....	....	1	....	....	....	....	1	1	3	47
Virginia	1	1	....	1	....	1	....	....	....	1	....	....	1	6	1	....	....	....	....	....	....	....	....	....	....	1	7
Washington	8	10	2	1	2	1	....	2	....	2	....	....	3	31	....	....	1	....	....	....	....	....	....	....	....	1	32
West Virginia	5	6	....	5	6	....	1	1	....	....	3	....	2	29	2	....	....	....	1	....	....	....	....	1	....	4	33
Wisconsin	3	3	2	3	3	1	3	....	....	1	3	....	1	23	....	....	2	....	1	....	1	....	....	....	....	4	27
Wyoming	....	....	....	....	2	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	2
Total, 1912	143	98	33	78	107	38	24	31	0	45	53	0	30	680	33	28	54	1	41	1	19	1	0	9	32	219	899
Total, 1911	203		(b)	128	c259	61		(b)	3	(b)	(b)	0	75	729	28	5	52	1	(b)	1	(b)	2	0	(b)	44	133	862

a Reported by W. W. Jones, State mine inspector, Albany, N. Y.

b Not segregated.

c Includes part of items in b.

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TABLE 13.—*Number of men slightly injured in and about* ***all*** *quarries in the United States during 1912, with the injuries classified according to cause.*

State.	In quarry.														Outside of quarry.												Grand total.
	Falls or slides of rock or overburden.	Rock while loading at working face.	Timber or hand tools.	Explosives.	Haulage accidents.	Falling into quarry from surface, benches, or face.	Falling from hoists, derricks, ladders, etc.	Drilling accidents (by machine or hand drills).	Electricity (shock or burns).	Machinery (pumps, hoisting, and haulage machinery, not including locomotives or drills).	Flying pieces of rock from sledging.	Stepping on nail.	Other causes.	Total slightly injured.	Quarry cars or locomotives.	Railway cars or locomotives.	Machinery.	Explosives.	Falls of persons.	Boiler explosions.	Timber or hand tools.	Electricity (shock or burns).	Stepping on nail.	Horse or mule.	Other causes.	Total slightly injured.	
	1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24		
Alabama	4	20	12	1	15	.....	1	11	....	2	3	....	.....	69	4	....	1	....	.....	....	12	....	.....	.....	3	20	89
Arizona	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	2	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	5
Arkansas	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	3
California	47	39	10	8	14	12	1	6	2	3	47	.....	.....	189	.....	2	5	....	11	....	4	.....	1	1	6	30	219
Colorado	4	.....	2	2	12	1	8	.....	.....	.....	8	....	1	38	.....	.....	12	....	.....	....	5	.....	.....	.....	1	18	56
Connecticut	1	1	.....	.....	2	.....	1	1	....	3	3	....	1	13	1	1	2	....	2	....	1	.....	.....	.....	.....	7	20
Georgia	7	8	2	2	3	.....	.....	2	....	1	3	....	6	34	.....	1	5	....	.....	....	.....	.....	.....	.....	.....	6	40
Idaho	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	2
Illinois	53	67	30	3	37	4	20	25	5	24	42	4	15	329	34	11	16	....	15	1	33	....	3	2	16	131	460
Indiana	38	30	36	4	20	11	10	28	3	60	14	3	15	272	29	4	47	....	12	....	41	7	6	4	54	204	476
Iowa	8	15	7	1	17	.....	3	6	....	5	2	....	9	73	.....	.....	3	....	2	....	1	.....	.....	.....	.....	6	79
Kansas	9	51	3	4	16	2	.....	1	....	2	2	....	2	92	4	.....	4	....	.....	....	1	.....	.....	.....	3	12	104
Kentucky	20	9	5	7	4	2	1	1	....	1	8	2	2	62	1	....	3	1	1	1	.....	.....	1	1	.....	9	71
Maine	22	1	1	2	6	.....	1	2	2	5	1	.....	.....	43	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	45
Maryland	7	23	7	5	8	1	.....	4	1	9	10	....	39	114	5	.....	2	....	5	....	.....	.....	.....	2	.....	14	128
Massachusetts	5	21	7	7	6	8	1	7	....	2	33	....	6	103	1	2	7	....	7	....	11	.....	1	2	17	48	151
Michigan	7	14	10	4	10	4	3	5	....	4	3	1	3	68	4	....	8	2	1	....	15	1	.....	.....	3	34	102
Minnesota	8	26	1	1	4	3	2	1	....	6	11	1	4	68	.....	.....	2	....	3	....	3	.....	1	.....	6	15	83
Missouri	106	64	36	24	20	18	....	19	2	15	46	3	13	366	38	10	6	....	2	....	11	.....	1	13	7	88	454
Montana	4	6	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1	13	.....	.....	2	....	.....	.....	.....	2	.....	.....	1	5	18
Nebraska	3	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	5
Nevada	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	1
New Hampshire	2	2	1	.....	2	2	4	.....	.....	1	4	2	3	23	.....	.....	1	....	.....	.....	.....	.....	1	....	2	4	27

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New Jersey	32	48	10	4	17	2	4	8	2	14	32	2	3	178	9	11	17	....	8	....	16	3	....	1	34	99	277
New Mexico	2	7	1	....	....	....	....	....	....	....	....	....	....	10	1	....	....	1	....	....	....	....	....	....	1	3	13
New York [a]	5	74	13	8	37	3	7	16	....	12	20	....	14	209	1	1	3	....	3	....	4	....	1	3	8	24	233
North Carolina	3	2	2	3	1	....	....	3	....	....	10	....	4	28	....	....	3	1	....	....	....	....	....	....	....	4	32
Ohio	22	60	26	14	62	10	9	37	....	37	19	4	28	328	26	5	48	....	26	....	50	2	3	4	33	197	525
Oklahoma	6	5	1	....	4	....	....	1	....	....	17	....	....	34	....	....	....	....	....	....	1	....	....	1	....	2	36
Oregon	....	....	....	1	....	....	....	....	....	1	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	0	2
Pennsylvania	323	159	38	17	102	8	7	25	....	12	98	2	19	810	29	4	36	5	17	....	13	2	1	11	19	137	947
Rhode Island	....	....	1	1	3	....	....	....	....	....	....	1	....	6	....	....	....	....	1	....	....	....	....	....	....	1	7
South Carolina	3	18	....	15	....	....	....	2	....	6	2	....	....	46	....	....	....	....	....	....	5	....	3	....	....	8	54
South Dakota	8	1	1	....	1	....	....	....	....	2	1	....	3	17	....	....	....	....	....	....	....	....	1	....	....	1	18
Tennessee	18	11	5	....	12	....	2	4	....	1	12	1	1	67	1	1	1	....	....	....	....	....	....	2	....	5	72
Texas	3	71	....	6	15	3	....	....	....	....	1	....	....	99	3	2	15	....	1	....	70	5	....	1	1	98	197
Utah	14	8	....	2	2	1	....	2	....	2	2	....	4	37	....	3	5	....	4	....	9	....	1	1	9	32	69
Vermont	6	27	36	8	11	4	3	16	....	25	5	1	30	172	....	....	5	....	11	1	3	....	1	....	10	31	203
Virginia	12	4	1	4	3	2	....	....	....	1	3	....	2	32	7	....	....	....	....	....	5	....	2	....	1	15	47
Washington	19	13	2	3	12	2	3	8	....	4	1	1	3	71	1	....	4	....	1	....	2	....	....	....	4	12	83
West Virginia	25	40	1	12	....	1	1	2	....	2	17	....	1	102	7	....	....	....	3	....	1	....	....	1	2	14	116
Wisconsin	2	13	4	7	5	2	4	2	....	6	11	....	7	63	....	....	3	....	....	....	1	....	....	....	6	10	73
Wyoming	3	....	....	1	....	....	....	....	....	1	....	....	....	5	....	....	....	....	....	....	....	....	....	....	....	0	5
Other States [b]	....	....	....	....	....	....	....	....	....	....	6	....	....	6	....	....	....	....	....	....	....	....	....	....	....	0	6
Total, 1912	861	963	314	182	486	106	96	245	17	270	497	28	242	4,307	208	58	266	10	136	3	318	22	28	50	*247	1,346	5,653
Total, 1911	1,085		(c)	213	d1,536	257		(c)	19	(c)	(c)	(c)	598	3,708	84	51	259	16	(c)	3	(c)	17	(c)	(c)	390	820	4,528

[a] Reported by W. W. Jones, State mine inspector. [b] Includes Delaware, Florida, and Louisiana. [c] Not segregated. [d] Includes part of items in *c*.

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TABLE 14.—*Number of men employed, number of days worked, and number of men killed and injured per 1,000 men employed in and about all quarries in the United States in the calendar year 1912.*

State.	Active operators.	Employees.			Days' work performed.	Average number of days worked.	Number killed.		Number seriously injured.		Number slightly injured.		Widows.	Orphans.
		In quarry.	Outside of quarry.	Total.			Total.	Per 1,000 employed.	Total.	Per 1,000 employed.	Total.	Per 1,000 employed.		
Alabama	29	1,165	730	1,895	547,966	289	2	1.06	13	6.86	89	46.97	1	0
Arizona	13	225	60	285	75,404	265	0	.....	3	10.53	5	17.54	0	0
Arkansas	36	675	138	813	192,129	236	2	2.46	1	1.23	3	3.69	0	0
California	122	2,926	1,486	4,412	1,253,144	284	7	1.59	54	12.24	219	49.64	3	4
Colorado	39	870	605	1,475	452,772	307	7	4.75	5	3.39	56	37.97	5	6
Connecticut	49	1,222	565	1,787	458,641	257	0	.....	2	1.12	20	11.19	0	0
Georgia	34	1,322	674	1,996	490,183	246	0	.....	5	2.51	40	20.04	0	0
Idaho	17	124	86	210	42,593	203	0	.....	0	.....	2	9.52	0	0
Illinois	90	3,099	1,054	4,153	1,009,042	243	11	2.65	76	18.30	460	110.76	6	14
Indiana	102	3,922	1,988	5,910	1,484,092	251	6	1.02	44	7.45	476	80.54	2	0
Iowa	69	1,083	188	1,271	367,190	289	2	1.57	9	7.08	79	62.16	1	6
Kansas	68	1,436	1,046	2,482	485,085	195	5	2.01	9	3.63	104	41.90	2	6
Kentucky	88	1,777	527	2,304	461,475	200	8	3.47	16	6.94	71	30.82	3	5
Maine	63	1,033	881	1,914	428,380	224	2	1.04	20	10.45	45	23.51	0	0
Maryland	64	1,897	1,131	3,028	809,894	267	7	2.31	23	7.60	128	42.27	3	3
Massachusetts	122	2,303	1,984	4,287	1,089,879	254	8	1.87	36	8.40	151	35.22	1	2
Michigan	32	1,098	734	1,832	434,351	237	3	1.64	29	15.83	102	55.68	1	1
Minnesota	76	1,416	1,042	2,458	603,501	246	2	.81	11	4.48	83	33.77	0	0
Missouri	134	2,771	1,292	4,063	1,012,982	249	9	2.22	29	7.14	454	111.74	3	4
Montana	15	168	139	307	71,819	234	1	3.26	2	6.51	18	58.63	0	0
Nebraska	12	421	109	530	100,141	189	0	.....	1	1.89	5	9.43	0	0
Nevada	4	31	12	43	10,236	238	0	.....	0	.....	1	23.26	0	0
New Hampshire	28	687	764	1,451	338,257	233	0	.....	12	8.27	27	18.61	0	0
New Jersey	81	2,505	1,261	3,766	945,999	251	7	1.86	39	10.36	277	73.55	5	9
New Mexico	9	372	64	436	96,591	222	2	4.59	4	9.17	13	29.82	1	5
New York[a]	181	3,469	1,219	4,688	980,178	210	15	3.20	36	7.68	233	49.70	(b)	(b)
North Carolina	30	945	238	1,183	301,604	255	0	.....	1	.85	32	27.05	0	0
Ohio	193	5,850	2,171	8,021	1,872,848	233	8	1.00	76	9.48	525	65.45	5	7
Oklahoma	19	534	280	814	220,474	271	0	.....	4	4.91	36	44.23	0	0
Oregon	18	188	74	262	37,739	144	2	7.63	0	.....	2	7.63	0	0
Pennsylvania	735	14,955	6,890	21,845	5,645,157	258	49	2.24	125	5.72	947	43.35	19	16
Rhode Island	16	453	503	956	258,916	271	2	2.09	1	1.05	7	7.32	1	0
South Carolina	10	314	66	380	99,551	262	0	.....	3	7.89	54	142.11	0	0
South Dakota	21	219	72	291	61,650	212	1	3.44	0	.....	18	61.86	1	4
Tennessee	75	2,528	643	3,171	744,137	235	6	1.89	52	16.40	72	22.71	2	2
Texas	41	1,114	712	1,826	432,924	237	3	1.64	3	1.64	197	107.89	0	0
Utah	32	357	273	630	169,274	269	1	1.59	7	11.11	69	109.52	0	0
Vermont	98	3,508	1,105	4,613	1,275,218	276	16	3.47	47	10.19	203	44.01	8	11

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Virginia	72	1,655	1,215	2,870	780,897	272	5	1.74	7	2.44	47	16.38	4	4
Washington	28	1,078	621	1,699	398,871	235	7	4.12	32	18.83	83	48.85	2	7
West Virginia	46	1,738	833	2,571	656,387	255	6	2.33	33	12.94	116	45.12	2	7
Wisconsin	136	2,150	1,500	3,650	835,859	229	1	.27	27	7.40	73	20.00	0	0
Wyoming	9	165	30	195	27,608	142	0		2	10.26	5	25.64	0	0
Other States c	7	194	138	332	90,005	271	0		0		6	18.07	0	0
Total, 1912	3,163	75,962	37,143	113,105	28,151,043	249	213	1.88	899	7.95	5,653	49.98	81	123
Total, 1911	3,920	79,879	31,075	110,954	25,325,094	228	188	1.69	862	7.77	4,528	40.81	89	129

a Fatalities and employees reported by W. W. Jones, State mine inspector, Albany, N. Y. Segregation of inside and outside employees based on returns for 1911.
b Not reported.
c Includes Delaware, Florida, and Louisiana.

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TABLE 15.—*Percentage of deaths in and about* ***all*** *quarries in the United States resulting from various causes in the calendar year 1912, and the different classes of quarries.*

Cause of death.	Cement rock.	Granite.	Limestone.	Marble.	Sandstone and bluestone.	Slate.	Trap rock.	Total quarries (1912).	Total quarries (1911).
In quarry:	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Falls or slides of rock or overburden	20.00	3.45	15.85	33.33	25.00	27.77	20.00	17.37	25.53
Rock while loading at working face	3.33	17.24	2.97	.....	.....	11.11	20.00	6.57	
Timber or hand tools	.....	.....	1.98	.....	12.50	5.56	.....	1.88	(a)
Explosives	6.67	34.48	25.74	.....	.....	.....	40.00	20.66	24.47
Haulage accidents	13.33	6.90	11.88	41.67	12.50	22.22	.....	13.15	10.64
Falling into quarry from surface, benches, or face	.....	10.34	4.95	8.33	12.50	.....	.....	4.69	8.51
Falling from hoists, derricks, ladders, etc	.....	3.45	.99	.....	.....	16.66	.....	2.34	
Drilling accidents	.....	3.45	.99	.....	.....	.....	.....	.94	(a)
Electricity	.....	.....	2.97	.....	.....	5.56	.....	1.88	.....
Machinery	.....	3.45	2.97	16.67	.....	.....	6.67	3.29	(a)
Flying pieces of rock from sledging	.....	.....	1.98	.....	12.50	.....	6.66	1.88	(a)
Stepping on nail	.....	.....	.....	.....	.....	.....	.....	.....	(a)
Other causes	.....	3.45	.99	.....	.....	.....	.....	.94	3.19
Killed in quarry	43.33	86.21	74.26	100.00	75.00	88.88	93.33	75.59	72.34
Outside of quarry:									
Quarry cars or locomotives	6.67	6.90	5.94	.....	.....	.....	.....	4.69	5.85
Railway cars or locomotives	3.33	.....	5.94	.....	.....	.....	.....	3.29	3.72
Machinery	20.00	3.45	5.94	.....	25.00	.....	6.67	7.51	9.04
Explosives	.....	.....	1.98	.....	.....	5.56	.....	1.41	2.13
Falls of persons	6.67	.....	1.98	.....	.....	.....	.....	1.88	(a)
Boiler explosions	.....	.....	.....	.....	.....	.....	.....	.....	1.60
Timber or hand tools	.....	.....	.....	.....	.....	5.56	.....	.47	(a)
Electricity	.....	.....	.....	.....	.....	.....	.....	.....	1.06
Stepping on nail	.....	.....	.....	.....	.....	.....	.....	.....	(a)
Horse or mule	.....	.....	1.98	.....	.....	.....	.....	.94	(a)
Other causes	20.00	3.45	1.98	.....	.....	.....	.....	4.22	4.26
Killed outside of quarry	56.67	13.79	25.74	.....	25.00	11.12	6.67	24.41	27.66
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

a Not segregated in 1911.

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TABLE 16.—*Percentage of serious injuries in and about* ***all*** *quarries in the United States resulting from various causes in the calendar year 1912, and the different classes of quarries.*

Cause of injury.	Granite.	Trap rock.	Sandstone and bluestone.	Limestone.	Marble.	Cement rock.	Slate.	Total quarries (1912).	Total quarries (1911).
In quarry:									
Falls or slides of rock or overburden	11.02	17.55	19.67	16.82	9.09	15.13	25.00	**15.90**	**23.55**
Rock while loading at working face	12.60	10.53	3.28	13.82	.....	7.62	3.57	**10.90**	
Timber or hand tools	5.51	1.75	3.28	1.95	18.19	4.20	3.57	**3.67**	(a)
Explosives	7.87	15.79	3.28	9.51	9.09	5.04	10.72	**8.68**	**14.85**
Haulage accidents	9.45	5.26	9.84	14.04	4.55	14.20	7.14	**11.90**	b **30.04**
Falling into quarry from surface, benches, or face	5.51	5.26	8.20	2.38	11.36	1.69	17.86	**4.23**	**7.08**
Falling from hoists, derricks, ladders, etc	4.73	3.51	.00	3.03	.....	1.69	.....	**2.67**	
Drilling accidents	3.94	.....	4.92	3.03	11.36	3.36	.....	**3.44**	(a)
Electricity	.....	.....	.....	.....	.....	.....	.....	.....	**.35**
Machinery	8.66	5.26	9.83	3.46	11.36	2.52	3.57	**5.01**	(a)
Flying pieces of rock from sledging	3.94	10.53	3.28	7.78	2.27	2.52	.....	**5.90**	(a)
Stepping on nail	.....	.....	.....	.....	.....	.....	.....	.....	(a)
Other causes	3.94	.....	9.83	2.80	6.82	1.69	3.57	**3.34**	**8.70**
Total seriously injured in quarry	77.17	75.44	75.41	78.62	84.09	59.66	75.00	**75.64**	**84.57**
Outside of quarry:									
Quarry cars or locomotives	2.36	3.51	.....	4.11	4.55	5.04	3.57	**3.67**	**3.25**
Railway cars or locomotives	.79	3.51	4.92	2.38	2.27	8.40	.....	**3.11**	**.58**
Machinery	5.51	8.77	4.92	4.75	.....	11.77	10.72	**6.01**	**6.03**
Explosives	.....	.....	1.64	.....	.....	.....	3.57	**.11**	**.12**
Falls of persons	3.15	.....	3.28	5.18	2.27	6.72	3.57	**4.56**	(a)
Boiler explosions	.....	.....	.....	.22	.....	.....	.....	**.11**	**.12**
Timber or hand tools	3.15	3.51	6.55	.86	4.55	2.52	.....	**2.11**	(a)
Electricity	.....	.....	.....	.....	.....	.84	.....	**.11**	**.23**
Stepping on nail	.....	.....	.....	.....	.....	.....	.....	.....	(a)
Horse or mule	.....	.....	1.64	1.08	2.27	1.68	.....	**1.01**	(a)
Other causes	7.87	5.26	1.64	2.81	.....	3.37	3.57	**3.56**	**5.10**
Total seriously injured outside of quarry	22.83	24.56	24.59	21.38	15.91	40.34	25.00	**24.36**	**15.43**
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	**100.00**	**100.00**

a Not segregated in 1911.

b Undoubtedly includes some items from a.

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TABLE 17.—*Percentage of slight injuries in and about* ***all*** *quarries in the United States resulting from various causes, in the calendar year 1912, and the different classes of quarries.*

Cause of injury.	Granite.	Trap rock.	Sandstone and bluestone.	Limestone.	Marble.	Cement rock.	Slate.	Total quarries (1912).	Total quarries (1911).
In quarry:									
Falls or slides of rock or overburden	8.42	5.76	10.76	18.92	2.48	12.18	29.33	15.23	23.96
Rock while loading at working face	17.02	24.10	11.95	17.19	4.97	18.73	2.67	17.04	
Timber or hand tools	4.39	3.24	7.17	5.57	19.88	4.34	4.00	5.55	(a)
Explosives	8.42	4.32	2.39	2.97	.....	1.57	4.00	3.22	4.70
Haulage accidents	8.24	2.52	7.97	9.93	4.35	7.10	9.33	8.60	b 33.92
Falling into quarry from surface, benches, or face	2.63	4.67	2.39	1.79	.62	.83	5.33	1.87	5.68
Falling from hoists, derricks, ladders, etc	1.93	.36	1.99	1.76	5.59	1.01	2.67	1.70	
Drilling accidents	2.98	4.67	3.19	4.73	14.91	2.58	2.67	4.33	(a)
Electricity	.18	.72	.40	.37	.....	.....	1.33	.30	.42
Machinery	6.67	.72	8.76	5.01	6.83	3.14	1.33	4.78	(a)
Flying pieces of rock from sledging	11.05	26.26	9.16	8.97	6.83	3.41	.....	8.79	(a)
Stepping on nail	.88	.72	1.20	.40	.....	.46	.....	.50	(a)
Other causes	6.84	1.08	12.35	2.88	5.59	4.89	18.67	4.28	13.21
Total slightly injured in quarry	79.65	79.14	79.68	80.49	72.05	60.24	81.33	76.19	81.89
Outside of quarry:									
Quarry cars or locomotives	1.40	1.44	1.20	4.14	.62	5.26	1.33	3.68	1.85
Railway cars or locomotives	1.23	1.80	.40	.62	.....	2.31	.....	1.03	1.13
Machinery	2.45	5.76	6.77	3.34	11.18	8.03	8.00	4.70	5.72
Explosives	.18	.72	.40	.18	.....	.....	.....	.18	.35
Falls of persons	3.51	3.95	1.99	2.16	1.86	2.49	.....	2.41	(a)
Boiler explosions	.18	.....	.....	.06	.....	.....	.....	.05	.07
Timber or hand tools	4.39	1.80	3.58	4.21	9.32	11.53	4.00	5.62	(a)
Electricity	.....	.....	.....	.22	.....	1.38	.....	.39	.38
Stepping on nail	1.23	.36	.....	.53	.62	.18	.....	.50	(a)
Horse or mule	.70	.....	.....	1.24	.....	.55	.....	.88	(a)
Other causes	5.08	5.03	5.98	2.81	4.35	8.03	5.34	4.37	8.61
Total slightly injured outside of quarry	20.35	20.86	20.32	19.51	27.95	39.76	18.67	23.81	18.11
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

a Not segrgated in 1911.

b Undoubtedly includes some items from a.

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TABLE 18.—*Number of men killed or injured per 1,000 employed, showing cause of death or injury, in* ***all*** *quarries in the United States in the calendar year 1912.*

Cause.	Number killed.								Number seriously injured.								Number slightly injured.							
	Cement rock.	Granite.	Limestone.	Marble.	Sandstone.[b]	Slate.	Trap rock.	**All quarries.**	Cement rock.	Granite.	Limestone.	Marble.	Sandstone.[b]	Slate.	Trap rock.	**All quarries.**	Cement rock.	Granite.	Limestone.	Marble.	Sandstone.[b]	Slate.	Trap rock.	**All quarries.**
In quarry:																								
Falls or slides of rock or overburden	1.54	0.08	0.39	1.35	0.28	1.22	0.62	**0.49**	4.63	1.16	1.90	1.35	1.64	1.71	2.07	**1.88**	33.99	3.97	14.94	1.35	3.73	5.40	3.31	**11.33**
Rock while loading at working face	.26	.41	.07	.....	.....	.49	.62	**.17**	2.32	1.33	1.56	.....	.28	.25	1.24	**1.29**	52.26	8.03	13.57	2.70	4.15	.49	13.86	**12.68**
Timber or hand tools	.....	.....	.05	.....	.14	.25	.....	**.05**	1.29	.58	.22	2.70	.28	.25	.21	**.43**	12.10	2.06	4.39	10.80	2.49	.74	1.87	**4.13**
Explosives	.51	.83	.63	.....	.....	.....	1.24	**.58**	1.54	.83	1.07	1.35	.28	.74	1.87	**1.03**	4.38	3.97	2.34	.....	.83	.74	2.48	**2.40**
Haulage accidents	1.03	.17	.29	1.69	.14	.98	.....	**.37**	4.38	.99	1.59	.67	.83	.49	.62	**1.41**	19.82	3.89	7.83	2.36	2.76	1.72	1.45	**6.40**
Falling into quarry from surface, benches, or face	.....	.25	.12	.34	.14	.....	.....	**.13**	.51	.58	.27	1.69	.69	1.22	.62	**.50**	2.32	1.24	1.42	.34	.83	.98	2.69	**1.40**
Falling from hoists, derricks, ladders, etc	.....	.08	.03	.....	.....	.74	.....	**.08**	.51	.50	.34	.....	.....	.....	.41	**.31**	2.83	.91	1.39	3.04	.69	.49	.21	**1.26**
Drilling accidents	.....	.08	.03	.....	.....	.....	.....	**.03**	1.03	.41	.34	1.69	.41	.....	.....	**.41**	7.21	1.41	3.73	8.10	1.11	.49	2.69	**3.23**
Electricity	.....	.....	.07	.....	.....	.25	.....	**.05**	.....	.....	.....	.....	.....	.....	.....	.....	.....	.08	.29	.....	.14	.25	.41	**.22**
Machinery	.....	.08	.07	.67	.....	.....	.21	**.09**	.78	.91	.39	1.69	.83	.25	.62	**.59**	8.75	3.14	3.95	3.71	3.04	.25	.41	**3.55**
Flying pieces of rock from sledging	.....	.....	.05	.....	.14	.....	.21	**.05**	.78	.41	.88	.34	.28	.....	1.24	**.70**	9.53	5.21	7.08	3.71	3.16	.....	15.11	**6.54**
Stepping on nail	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.29	.41	.32	.....	.41	.....	.41	**.37**
Other causes	.....	.08	.03	.....	.....	.....	.....	**.03**	.51	.41	.32	1.01	.83	.25	.....	**.40**	13.65	3.23	2.27	3.04	4.28	3.43	.62	**3.19**
Average, in quarry [a]	3.34	2.06	1.83	4.05	.84	3.93	2.90	**2.12**	18.28	8.11	8.88	12.49	6.35	5.16	8.90	**8.95**	168.13	37.55	63.52	39.15	27.62	14.98	45.52	**56.70**

[a] Inside accidents based upon total number of "inside" employees.
[b] Includes bluestone.

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TABLE 18.—*Number of men killed or injured per 1,000 employed, showing cause of death or injury, in all quarries in the United States in the calendar year 1912*—Continued.

Cause.	Number killed.								Number seriously injury.								Number slightly injured.							
	Cement rock.	Granite.	Limestone.	Marble.	Sandstone.	Slate.	Trap rock.	All quarries.	Cement rock.	Granite.	Limestone.	Marble.	Sandstone.	Slate.	Trap rock.	All quarries.	Cement rock.	Granite.	Limestone.	Marble.	Sandstone.	Slate.	Trap rock.	All quarries.
Outside of quarry:																								
Quarry cars or locomotives	.35	.29	.39	.....	.....	.....	.....	.27	1.06	.44	1.23	1.25	.....	.27	1.48	.89	10.04	1.17	8.70	.62	1.19	.27	2.96	5.60
Railway cars or locomotives	.18	.....	.39	.....	.....	.....	.....	.19	1.76	.15	.72	.62	1.19	.....	1.48	.76	4.40	1.02	1.30	.....	.40	.....	3.69	1.56
Machinery	1.06	.15	.39	.....	.80	.....	.74	.43	2.46	1.03	1.43	.....	1.19	.79	3.69	1.45	15.32	2.05	7.02	11.23	6.76	1.60	11.83	7.16
Explosives	.....	.....	.13	.....	.....	.27	.....	.08	.....	.....	.....	.....	.40	.27	.....	.05	.....	.15	.39	.....	.40	.....	1.48	.27
Falls of persons	.35	.....	.13	.....	.....	.....	.....	.11	1.41	.58	1.56	.62	.80	.27	.....	1.08	4.76	2.92	4.55	1.87	1.99	.....	8.13	3.66
Boiler explosions	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.07	.....	.....	.....	.....	.03	.....	.15	.13	.....	.....	.....	.....	.08
Timber or hand tools	.....	.....	.....	.....	.....	.27	.....	.03	.53	.58	.26	1.25	1.59	.....	1.48	.51	22.01	3.66	8.83	9.36	3.58	.79	3.69	8.56
Electricity	.....	.....	.....	.....	.....	.....	.....	.....	.18	.....	.....	.....	.....	.....	.....	.03	2.64	.....	.45	.....	.....	.....	.....	.59
Stepping on nail	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.35	1.02	1.10	.62	.....	.....	.74	.76
Horse or mule	.....	.....	.13	.....	.....	.....	.....	.05	.35	.....	.32	.62	.40	.....	.....	.24	1.06	.58	2.60	.....	.....	.....	.....	1.35
Other causes	1.06	.15	.13	.....	.....	.....	.....	.24	.70	1.46	.84	.....	.40	.27	2.22	.86	15.32	4.23	5.91	4.37	5.97	1.07	10.35	6.65
Average, outside of quarry [a]	2.99	.58	1.69	.....	.80	.54	.74	1.40	8.45	4.24	6.43	4.36	5.97	1.87	10.35	5.89	75.90	16.95	40.98	28.07	20.29	3.73	42.87	36.24
Average, in and outside of quarry [b]	3.17	1.53	1.79	2.63	.82	2.30	2.42	1.88	12.58	6.71	8.21	9.64	6.25	3.58	9.21	7.95	114.56	30.10	57.35	35.26	25.74	9.58	44.94	49.89

[a] Outside accidents based upon total number of "outside" employees.

[b] Total rates based upon total number of employees.

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TABLE 19.—*Number of men killed or injured per 1,000 employed in and about all quarries in the United States in the calendar year 1912, based on the actual average number of days worked, compared with similar data based on a year of 300 working days.*[a]

State.	Average number of days worked, 1912.	Number killed.		Number seriously injured.		Number slightly injured.	
		As reported.	On 300-day basis.	As reported.	On 300-day basis.	As reported.	On 300-day basis.
Alabama	289	1.06	1.10	6.86	7.12	46.97	48.76
Arizona	265	.....	.....	10.53	11.92	17.54	19.86
Arkansas	236	2.46	3.13	1.23	1.56	3.69	4.69
California	284	1.59	1.68	12.24	12.93	49.64	52.44
Colorado	307	4.75	4.64	3.39	3.31	37.97	37.10
Connecticut	257	.....	.....	1.12	1.31	11.19	13.06
Georgia	246	.....	.....	2.51	3.06	20.04	24.44
Idaho	203	.....	.....	.....	.....	9.52	14.07
Illinois	243	2.65	3.27	18.30	22.59	110.76	136.74
Indiana	251	1.02	1.22	7.45	8.90	80.54	96.26
Iowa	289	1.57	1.63	7.08	7.35	62.16	64.53
Kansas	195	2.01	3.09	3.63	5.58	41.90	64.46
Kentucky	200	3.47	5.21	6.94	10.41	30.82	46.23
Maine	224	1.04	1.39	10.45	13.10	23.51	31.49
Maryland	267	2.31	2.59	7.60	8.54	42.27	47.49
Massachusetts	254	1.87	2.21	8.40	9.92	35.22	41.59
Michigan	237	1.64	2.08	15.83	20.04	55.68	70.48
Minnesota	246	.81	.99	4.48	5.46	33.77	41.18
Missouri	249	2.22	2.67	7.14	8.60	111.74	134.63
Montana	234	3.26	4.18	6.51	8.35	58.63	75.17
Nebraska	189	.....	.....	1.89	3.00	9.43	14.97
Nevada	238	.....	.....	.....	.....	23.25	29.31
New Hampshire	233	.....	.....	8.27	10.65	18.61	23.96
New Jersey	251	1.86	2.22	10.36	12.38	73.55	87.91
New Mexico	222	4.59	6.20	9.17	12.39	29.82	40.30
New York	210	3.20	4.57	7.68	10.97	49.70	71.00
North Carolina	255	.....	.....	.85	1.00	27.05	31.82
Ohio	233	1.00	1.29	9.48	12.21	65.45	84.27
Oklahoma	271	.....	.....	4.91	5.44	44.23	48.97
Oregon	144	7.63	15.90	.....	.....	7.63	15.89
Pennsylvania	258	2.24	2.60	5.72	6.65	43.35	50.41
Rhode Island	271	2.09	2.31	1.05	1.16	7.32	8.10
South Carolina	262	.....	.....	7.89	9.03	142.11	162.72
South Dakota	212	3.44	4.87	.....	.....	61.86	87.54
Tennessee	235	1.89	2.41	16.40	20.94	22.71	28.98
Texas	237	1.64	2.08	1.64	2.08	107.89	136.57
Utah	269	1.59	1.77	11.11	12.39	109.52	122.14
Vermont	276	3.47	3.77	10.19	11.08	44.01	47.84
Virginia	272	1.74	1.92	2.44	2.69	16.38	18.07
Washington	235	4.12	5.26	18.83	24.04	48.85	62.36
West Virginia	255	2.33	2.74	12.84	15.11	45.12	53.08
Wisconsin	229	.27	.35	7.40	9.69	20.00	26.20
Wyoming	142	.....	.....	10.26	21.68	25.64	54.17
Other States[b]	271	.....	.....	.....	.....	18.07	20.00
Average	249	1.88	2.27	7.95	9.58	49.98	60.22

[a] For details giving number killed and injured, number employed and days worked, see Table 14.
[b] Includes Delaware, Florida, and Louisiana.

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TABLE 20.—*Number of men* ***killed*** *in and about* ***all*** *quarries in the United States in the calendar year 1911, with the fatalities classified according to cause.*

State.	In quarry.								Outside of quarry.								Grand total.
	Falls or slides of overburden or top.	Falls or slides of quarry material.	Explosives.	Haulage and handling material.	Falls of person.	Electricity (shock or burns).	Other causes.	Total killed.	Quarry cars or locomotives.	Railway cars or locomotives.	Machinery	Explosives.	Boiler explosions.	Electricity (shock or burns).	Other causes.	Total killed.	
Killed:																	
Alabama		2		1				3								0	3
Arizona								0								0	0
Arkansas								0				1				1	1
California	4	8	5	2	2			21	1							1	22
Colorado	1							1		2						2	3
Connecticut	1			1				2								0	2
Delaware								0								0	0
Florida								0								0	0
Georgia				1				1								0	1
Idaho								0								0	0
Illinois			7		2			9			2				1	3	12
Indiana				1	1		1	3		1				2		3	6
Iowa				3				3				1				1	4
Kansas		1			1			2								0	2
Kentucky			2					2	1		1					2	4
Maine				1	2			3								0	3
Maryland	1		2	1				4			1				1	2	6
Massachusetts								0			3				1	4	4
Michigan					1			1	1				1			2	3
Minnesota				1				1	1							1	2
Missouri	2	3	3					8		1						1	9
Montana								0								0	0
Nebraska			3					3								0	3
New Hampshire								0								0	0
New Jersey	1						1	2	1							1	3
New Mexico								0								0	0
New York [a]	1	1	1					3			1					1	4
North Carolina		2						2								0	2
Ohio			4	4	1			9	2		1		2		1	6	15
Oklahoma					1			1								0	1
Oregon		2	1					3								0	3
Pennsylvania	4	5	8	2	4		2	25	1		5	1			1	8	33
Rhode Island								0								0	0
South Carolina								0		1						1	1
South Dakota								0								0	0
Tennessee	2							2	1							1	3
Texas			3					3							3	3	6

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Utah	2							2		1						1	3
Vermont		2	3	1	1			7	1							1	8
Virginia								0		1						1	1
Washington	1		3	1			2	7			2					2	9
West Virginia								0	1							1	1
Wisconsin	1		1					2			1	1				2	4
Wyoming	1							1								0	1
Other States[b]								0								0	0
Total	22	26	46	20	16	0	6	136	11	7	17	4	3	2	8	52	188

[a] Reported by W. W. Jones, State mine inspector, Albany, N.Y.

[b] Includes Louisiana, Nevada, and District of Columbia.

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TABLE 21.—*Number of men employed, number of days worked, and number of men killed and injured per 1,000 men employed in and about* ***all*** *quarries in the United States in the calendar year 1911.*

State.	Operators reporting.	Employees.		Total.	Days' work performed.	Average number of days worked.	Killed.		Seriously injured.		Slightly injured.		Widows.	Orphans.
		In quarry.	Outside of quarry.				Total.	Per 1,000 employed.	Total.	Per 1,000 employed.	Total.	Per 1,000 employed.		
Alabama	32	1,253	899	2,152	582,204	271	3	1.39	1	0.46	110	51.14	2	0
Arizona	17	126	75	201	38,094	190	0	.....	3	14.93	16	79.60	0	0
Arkansas	28	508	166	674	109,506	162	1	1.48	1	1.48	22	32.64	0	0
California	130	3,148	697	3,845	1,028,087	267	22	5.72	51	13.26	203	52.80	5	0
Colorado	55	700	83	783	200,782	256	3	3.83	13	16.60	35	44.70	0	0
Connecticut	48	763	406	1,169	228,308	195	2	1.71	4	3.42	22	18.82	0	0
Delaware	4	198	72	270	61,815	229	0	.....	1	3.70	11	40.74	0	0
Florida	4	62	49	111	25,835	233	0	.....	0	.....	0	.....	0	0
Georgia	44	1,509	520	2,029	343,192	169	1	.49	1	.49	88	43.37	0	0
Idaho	20	111	28	139	17,174	124	0	.....	0	.....	0	.....	0	0
Illinois	95	3,534	974	4,508	1,132,761	251	12	2.66	58	12.87	418	92.72	3	3
Indiana	114	3,566	1,493	5,059	1,095,923	217	6	1.19	38	7.51	355	70.17	4	7
Iowa	75	1,004	130	1,134	237,762	210	4	3.53	6	5.29	55	48.50	2	1
Kansas	99	1,884	526	2,410	444,159	184	2	.83	26	10.79	161	66.80	1	0
Kentucky	104	2,345	483	2,828	535,874	189	4	1.41	21	7.43	57	20.16	3	3
Maine	82	1,494	1,069	2,563	646,576	252	3	1.17	16	6.24	24	9.36	0	0
Maryland	59	1,521	770	2,291	528,097	231	6	2.62	20	8.73	74	32.30	3	12
Massachusetts	126	2,184	1,482	3,666	884,171	241	4	1.09	24	6.55	127	34.64	2	3
Michigan	30	819	406	1,225	220,960	180	3	2.45	24	19.59	40	32.65	1	0
Minnesota	91	1,478	723	2,201	449,846	204	2	.91	4	1.82	65	29.53	1	5
Missouri	171	3,577	1,273	4,850	1,048,675	216	9	1.86	37	7.63	245	50.52	6	8
Montana	16	223	54	277	66,040	238	0	.....	5	18.05	5	18.05	0	0
Nebraska	11	208	19	227	63,786	281	3	13.22	0	.....	2	8.81	2	1
New Hampshire	29	702	395	1,097	254,189	232	0	.....	2	1.82	10	9.12	0	0
New Jersey	92	2,457	616	3,073	678,102	221	3	.98	61	19.85	180	58.57	3	5
New Mexico	11	494	76	570	106,570	187	0	.....	5	8.77	5	8.77	0	0
New York	353	5,967	1,783	7,750	1,653,417	213	4	.52	56	7.23	228	29.42	2	4
North Carolina	34	1,086	475	1,561	375,060	240	2	1.28	1	.64	134	85.84	0	0
Ohio	231	6,507	2,272	8,779	2,077,323	237	15	1.71	59	6.72	565	64.36	12	15
Oklahoma	33	948	259	1,207	332,283	275	1	.83	22	18.23	63	52.20	1	0
Oregon	28	314	93	407	69,904	172	3	7.37	2	4.91	8	19.66	0	0
Pennsylvania	966	15,177	5,934	21,111	4,786,378	227	33	1.56	136	6.44	504	23.87	15	31
Rhode Island	15	380	569	949	246,104	259	0	.....	6	6.32	9	9.48	0	0
South Carolina	13	334	98	432	110,605	256	1	2.31	2	4.63	38	87.96	1	0
South Dakota	20	163	127	290	69,404	239	0	.....	1	3.45	12	41.38	0	0
Tennessee	71	2,124	442	2,566	601,185	234	3	1.17	22	8.57	53	20.65	2	0
Texas	49	913	835	1,748	394,771	226	6	3.43	14	8.01	73	41.76	3	5
Utah	40	301	219	520	133,927	258	3	5.77	11	21.16	64	123.08	2	1

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Vermont	107	2,846	940	3,786	988,553	261	8	2.11	36	9.51	204	53.88	4	8
Virginia	85	1,670	1,041	2,711	661,376	244	1	.37	20	7.38	54	19.92	0	0
Washington	48	1,784	569	2,353	580,632	247	9	3.82	20	8.50	80	34.00	5	5
West Virginia	61	913	490	1,403	323,329	230	1	.71	7	4.99	38	27.08	1	3
Wisconsin	166	2,451	1,428	3,879	859,527	222	4	1.03	23	5.93	69	17.79	3	9
Wyoming	9	61	11	72	13,653	190	1	13.89	1	13.89	2	27.78	0	0
Other States [a]	4	72	6	78	19,175	246	0	.....	1	12.82	0	.....	0	0
Total	3,920	79,879	31,075	110,954	25,325,094	228	188	1.69	862	7.77	4,528	40.81	89	129

[a] Includes Louisiana, Nevada, and District of Columbia.

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TABLE 22.—*Number of men* ***killed*** *in and about* ***all*** *quarries in the United States during 1911 and 1912, showing increase or decrease for 1912.*

State.	Number killed.		Increase or decrease.
	1911	1912	
Alabama	3	2	− 1
Arizona	0	0	0
Arkansas	1	2	+ 1
California	22	7	−15
Colorado	3	7	+ 4
Connecticut	2	0	− 2
Georgia	1	0	− 1
Idaho	0	0	0
Illinois	12	11	− 1
Indiana	6	6	0
Iowa	4	2	− 2
Kansas	2	5	+ 3
Kentucky	4	8	+ 4
Maine	3	2	− 1
Maryland	6	7	+ 1
Massachusetts	4	8	+ 4
Michigan	3	3	0
Minnesota	2	2	0
Missouri	9	9	0
Montana	0	1	+ 1
Nebraska	3	0	− 3
New Hampshire	0	0	0
New Jersey	3	7	+ 4
New Mexico	0	2	+ 2
New York	4	15	+11
North Carolina	2	0	− 2
Ohio	15	8	− 7
Oklahoma	1	0	− 1
Oregon	3	2	− 1
Pennsylvania	33	49	+16
Rhode Island	0	2	+ 2
South Carolina	1	0	− 1
South Dakota	0	1	+ 1
Tennessee	3	6	+ 3
Texas	6	3	− 3
Utah	3	1	− 2
Vermont	8	16	+ 8
Virginia	1	5	+ 4
Washington	9	7	− 2
West Virginia	1	6	+ 5
Wisconsin	4	1	− 3
Wyoming	1	0	− 1
Other States [a]	0	0	0
Total	188	213	+25

[a] Includes Delaware, Florida, Louisiana, Nevada, and District of Columbia.

TABLE 23.—*Number of men employed and number of men killed in and about all mines and quarries in the United States during 1911 and 1912.*

Kind of mines.	1911			1912		
	Number employed.	Number killed.		Number employed.	Number killed.	
		Total.	Per 1,000 employed.		Total.	Per 1,000 employed.
Quarries	110,954	188	1.69	113,105	213	1.88
Coal mines	728,348	2,719	3.73	722,662	2,360	3.27
Metal mines	165,979	695	4.19	169,199	661	3.91
Total	1,005,281	3,602	3.58	1,004,966	3,234	3.22

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TABLE 24.—*Percentage of persons killed by different causes in and about quarries, metal mines, and coal mines in the United States during 1911 and 1912.*

Cause of death.	Killed, 1911			Killed, 1912		
	Quarries.	Metal mines.	Coal mines.	Quarries.	Metal mines.	Coal mines.
Falls of overburden, roof, quarry material, ore, or coal	*Per cent.* 25.53	*Per cent.* 32.52	*Per cent.* 48.58	*Per cent.* 23.94	*Per cent.* 34.82	*Per cent.* 48.77
Explosives	26.60	11.23	4.93	22.07	14.21	5.64
Haulage and handling rock, ore, or coal	20.21	7.63	17.54	22.07	9.99	19.11
Fall of person	8.51	15.39	1.54	9.39	13.91	1.19
Electricity	1.06	2.16	3.46	1.88	3.02	3.60
Machinery	9.04	3.07	1.95	10.80	3.82	1.86
Other causes	9.05	28.00	22.00	9.85	20.23	19.83
	100.00	100.00	100.00	100.00	100.00	100.00

TABLE 25.—*Fatality rates in quarries, coal and metal mines based on the actual average number of men employed and the equivalent of 300-day workers.*

Basis of figures.	1911			1912		
	Number of men employed.	Number killed.	Number killed per 1,000 employed.	Number of men employed.	Number killed.	Number killed per 1,000 employed.
Quarries.						
Average number employed	110,954	188	1.69	113,105	213	1.88
Number of 300-day workers	84,816	188	2.22	93,836	213	2.27
Metal mines.						
Average number employed	165,979	695	4.19	169,199	691	3.91
Number of 300-day workers	156,088	695	4.45	161,661	691	4.09
Coal mines.						
Average number employed	728,348	2,719	3.73	722,662	2,366	3.27
Number of 300-day workers	534,158	2,719	5.09	541,776	2,360	4.36

TABLE 26.—*Death rate from accidents at all quarries in* ***Great Britain*** *under the quarries act, from 1903 to 1912, inclusive.*[a]

Year.	Number of employees.			Number killed.					
				In quarry.		Outside of quarry.		Total.	
	In quarry.	Outside of quarry.	Total.	Number.	Per 1,000 employed.	Number.	Per 1,000 employed.	Number.	Per 1,000 employed.
1903	62,921	35,234	98,155	84	1.34	11	0.31	95	0.97
1904	62,249	35,328	97,577	96	1.54	16	.45	112	1.15
1905	59,978	34,841	94,819	85	1.42	14	.40	99	1.04
1906	58,385	33,131	91,916	85	1.46	12	.36	97	1.06
1907	55,894	31,920	87,814	75	1.34	14	.44	89	1.01
1908	54,449	31,026	85,475	76	1.40	16	.52	92	1.08
1909	53,064	30,873	83,937	73	1.38	11	.36	84	1.00
1910	54,408	31,429	85,837	75	1.38	9	.29	84	.98
1911	52,053	30,810	82,863	81	1.56	18	.58	99	1.19
1912	51,055	28,832	79,887	56	1.10	19	.66	75	.94
Average fatality rates, 1903–1912, inclusive	.....	.....	.....	.....	1.39	.....	.43	.....	1.04

[a] Compiled from Mines and Quarries, General Report with Statistics.

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TABLE 27.—*Number of men employed, number killed, and number killed per 1,000 employed in and about the quarries of* ***France*** *in the calendar years 1906–1910.*[a]

Year.	Number employed.	Number killed.	
		Total.	Per 1,000 employed.
1906	132,830	121	0.91
1907	133,044	141	1.06
1908	134,078	151	1.13
1909	132,884	136	1.02
1910	126,344	161	1.27
Average	131,836	142	1.08

[a] Also includes a small number of iron mines.

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